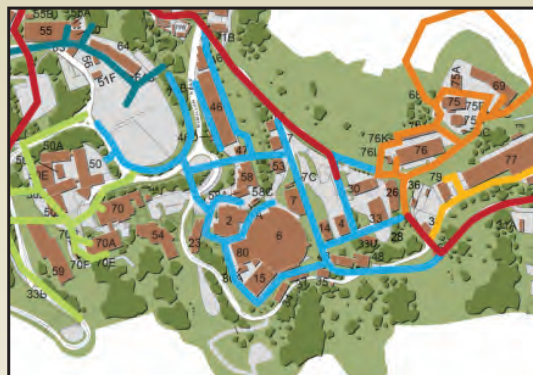




Lawrence Berkeley National Laboratory **2017 Annual Financial Report**



Front Cover:

Top — Inside the Advanced Light Source (ALS) looking up at the dome. Credit: Kelly J. Owen

Lower Left — Building 5 demolition in Old Town. Credit: Roy Kaltschmidt

Lower Middle — Map showing Lab utility infrastructure. Credit: Berkeley Lab Facilities and Creative Services

Lower Right — Rendering of completed Integrative Genomics Building (IGB). Credit: SmithGroup JJR

Lawrence Berkeley National Laboratory
2017 Annual Financial Report

Ernest Orlando Lawrence Berkeley National Laboratory
University of California
Berkeley, California

February 2018



Table of Contents

Chief Financial Officer's Statement	1
Lawrence Berkeley National Laboratory (LBNL), University of California Organization.....	2
Office of the Chief Financial Officer Organization	3
1. INSTITUTIONAL INFORMATION	5
Where Did Your Program Dollars Go in FY2017? ■ Figure 1.1.....	6
Cost Trends by Expense Category, FY2013-FY2017 (\$M and % of Total) ■ Table 1.1.....	7
Direct Cost Trends by Division, FY2013 - FY2017 (\$K) ■ Table 1.2.....	8
Costs by Direct Funding Source by Area and Division, FY2017 (\$K) ■ Table 1.2a	10
Costs by Direct Funding Source by Area and Division, FY2016 (\$K) ■ Table 1.2b	12
Costs by Direct Funding Source by Area and Division, FY2015 (\$K) ■ Table 1.2c.....	13
Costs by Direct Funding Source by Area and Division, FY2014 (\$K) ■ Table 1.2d	14
Costs by Direct Funding Source by Area and Division, FY2013 (\$K) ■ Table 1.2e	15
Indirect Budget Costs by Area and Division, FY2017 (\$K) ■ Table 1.3	16
Average FTE Breakdown by Area and Division, FY2017 ■ Table 1.4.....	18
Funds Held for Others Cost Trends, FY2013-FY2017 (\$K) ■ Table 1.5.....	20
2. DIRECT FUNDING — DOE & REIMBURSABLE WORK.....	21
Total Laboratory Funding.....	22
Berkeley Lab Funding Trends (BA) by Funding Source (\$K) ■ Table 2.1	23
Berkeley Lab Cost Trends by Funding Source (\$K) ■ Table 2.2	25
Berkeley Lab Funding and Costs by Funding Source (\$K) ■ Table 2.3.....	26
FY2017 Funding and Costs by DOE Programs (\$K) ■ Table 2.4	28
FY2017 Funding and Costs by Other Direct Operating Source (\$K) ■ Table 2.5	38
Total Funding Amounts by Area and Division for Each Fiscal Year (\$K) ■ Table 2.6	39
FY2017 Funding and Cost Trends by Other Direct Operating Source (\$K) ■ Figure 2.1.....	40
3. INDIRECT BUDGETS	41
Indirect Budgets — FY2017 Costs (\$M) ■ Figure 3.1	42
Institutional Overhead Costs as a Percent of Operating Costs, FY2013-FY2017 ■ Figure 3.2	43
Institutional Costs by Division, FY2017 (\$K) ■ Table 3.1	44
Institutional FTEs Charged by Division, FY2017 ■ Table 3.2	45
Payroll Burden Summary (\$M) ■ Figure 3.3.....	46
Gross Payroll Summary (\$M) ■ Figure 3.4	46
Organizational Burden Costs and FTEs ■ Table 3.3	47
Service Center Costs and FTEs ■ Table 3.4	48
Distributed Recharges by Resource Category Trends, FY2013-FY2017 (\$K) ■ Table 3.5	49

Table of Contents Continued

4. FINANCIAL STATEMENT	51
Balance Sheet Comparative Statement of Financial Position (\$K) ■ Table 4.1	52
Note 1: Summary of Significant Accounting Policies.....	53
Note 2: FY2017 Year-End Adjustments.....	55
Note 3: FY2016 Year-End Adjustments.....	56
5. PROCUREMENT & PROPERTY MANAGEMENT.....	57
Purchases Placed Using Purchase Orders/Subcontracts ■ Table 5.1	58
Procurement Purchase Order Dollar Amount by Area ■ Table 5.2	58
Procurement Spend by Channel (\$K) ■ Figure 5.1.....	59
Laboratory Supplier Socioeconomic Performance ■ Figure 5.2	59
Cycle Time for Purchase Orders ≤\$25K – Subcontracting Groups FY2017 ■ Figure 5.3	60
Procurement Cost Savings ■ Figure 5.4	60
Property Management Activity ■ Table 5.3	61
6. ACRONYMS & KEY TERMS.....	63

Lawrence Berkeley National Laboratory is an internationally renowned research institution dedicated to addressing the world's most urgent scientific challenges, from advancing sustainable energy and protecting human health to revealing the origins and fate of the universe. As the original home of "team science," which emphasizes interdisciplinary research in the public interest, Berkeley Lab's scientific expertise has been recognized with 13 Nobel Prizes. The University of California has managed the Lab on behalf of the U.S. Department of Energy (DOE) since its founding in 1931.



FY2017 was a year of notable accomplishments and challenges that were reflected in Berkeley Lab's financial results. Under the leadership of Laboratory Director Michael Witherell and Deputy Lab Directors Horst Simon (Research) and Glenn Kubiak (Operations), Berkeley Lab made excellent progress with science and technology mission priorities, and operations initiatives and support. The Lab's strategic priorities included the Advanced Light Source Upgrade, Exascale for Science, the Biosciences Campus and Infrastructure Renewal. Construction of the Integrative Genomics Building, the first Biosciences Campus building, was well underway, with completion expected in FY2019. Among Berkeley Lab's many research milestones of FY2017, significant progress was made on the Dark Energy Spectroscopic Instrument (DESI) – installation will soon begin to create the largest 3-D map of the universe. The Lab is also building momentum in quantum computing research, a new kind of computing architecture that could help solve some of science's hardest problems.

The Laboratory focused on its people and organization by committing funding to develop early career scientists; leading an initiative to enhance diversity, equity and inclusion, and

defining the Lab's stewardship role for its science and technology capabilities, people and resources. This comprehensive approach enhanced Berkeley Lab's ability to sustain its scientific leadership, mission contributions and stewardship responsibilities to DOE and the Nation.

Berkeley Lab received \$948M in new FY2017 funding, a 6% increase over FY2016 across both programmatic and infrastructure activities. FY2017 costs were \$858M, an increase of 4% over FY2016. Costs tracked closely with increased funding received in FY2016 and FY2017 for program growth and capital and equipment investments. Effective cost management was essential to assure the Lab remained cost competitive, continued to invest in infrastructure, and was positioned for potential funding changes. The Lab's total indirect budget reflected a very modest increase to incorporate a handful of important needs along with escalation for 'fenced' costs. All indirect-funded Operations units fully absorbed labor escalation, mitigating most of the indirect budget increase. The strategy's success is apparent in the trend for Berkeley Lab's salary multiplier (a key measure of our competitive position), which remained in line with other DOE labs, and flat since 2015.

OCFO Mission: High-value financial and procurement services and strategic solutions that contribute to Berkeley Lab's research and stewardship mission

The Office of the Chief Financial Officer (OCFO) played a key role in shaping and managing the financial strategy that prepared the Laboratory to adapt to new federal priorities and potential changes in funding and economic conditions. The OCFO led a lab-wide planning effort to assure effective resource management during the Federal Administration transition. This required close collaboration with all elements of the Lab, including the Lab Directorate, Human Resources, Communications, Government Affairs, and all of the scientific and operations units.

The OCFO updated our Strategic Roadmap, made excellent progress on key initiatives, and focused on enhancing core services and operations. We continued to lead the Advance Planning initiative for major projects, and served as a key contributor to the Lab's prime contract reform effort, two activities aligned with the OCFO's Customer and Partner Engagement strategic priority. We launched the OCFO Diversity and Inclusion Council, piloted an employee mentoring program,

and sponsored the second Partners in Leadership staff development cohort, all elements of our Employee Engagement and Development priority. We advanced our Field Finance Organization Transformation initiative by implementing a new management structure and further developing our strong Field Finance team. Under our Continuous Service Improvement priority, we launched a new OCFO intranet and updated our OCFO Systems and Business Intelligence strategies. Across the OCFO, we focused on our partnerships with scientific customers and key stakeholders, to assure efficient services, strong consultative support, and effective stewardship.

Berkeley Lab's FY2017 progress on all fronts – scientific, operations, and financial management – was instrumental in assuring that the Lab continued to bring science solutions to the world.

Kim Williams
Chief Financial Officer

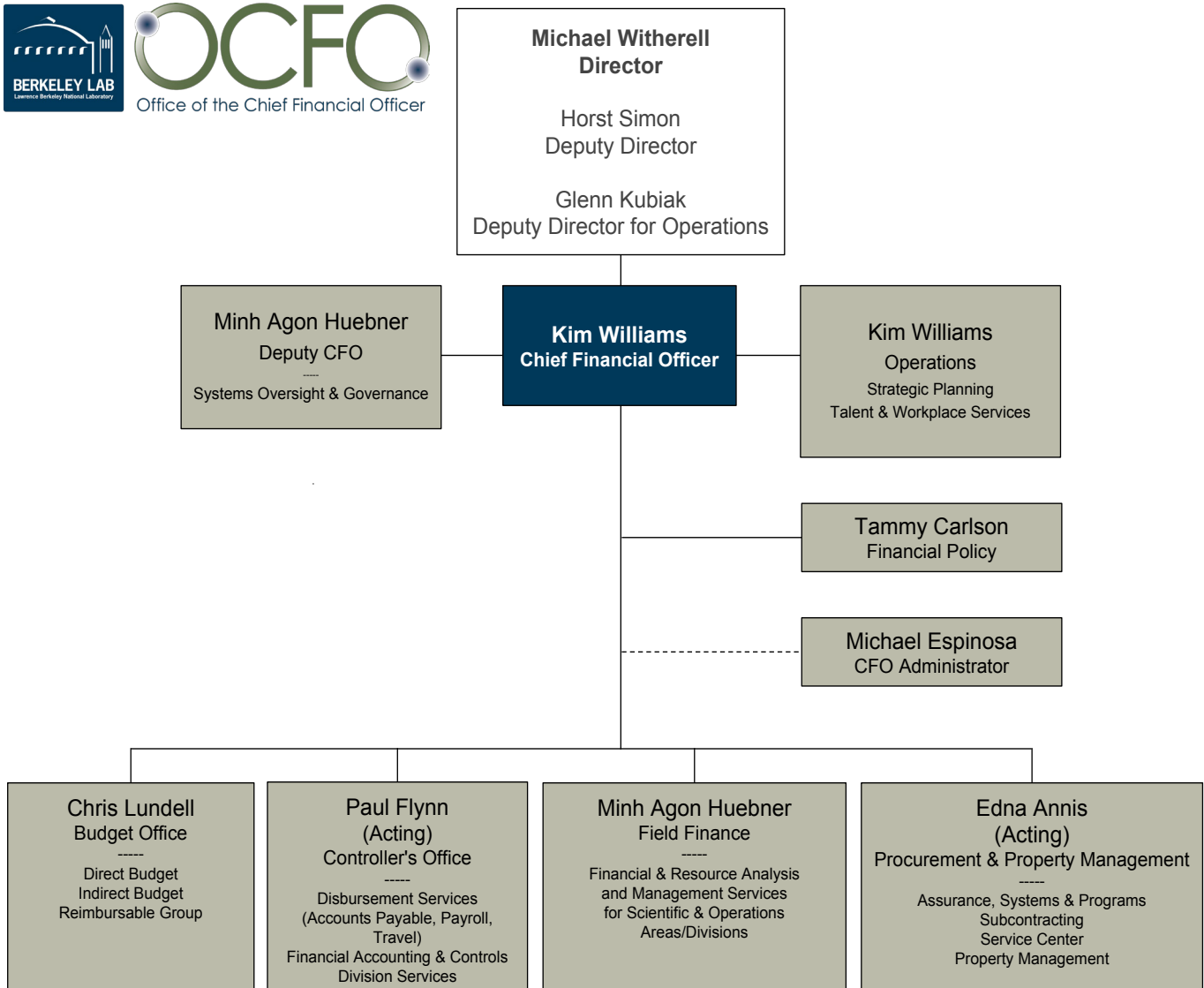
Lawrence Berkeley National Laboratory (LBNL), University of California Organization



Office of the Chief Financial Officer Organization



Office of the Chief Financial Officer



08/8/17

1. INSTITUTIONAL INFORMATION

Figure 1.1

Where Did Your Program Dollars Go in FY2017?

Expenses	DOE Operating Costs	DOE Integrated Contractors Costs	Construction and Equipment	SPP Non-DOE
DIRECT				
Direct Labor				
UC Labor (a)	\$0.34	\$0.33	\$0.16	\$0.35
Contract Labor	\$0.00	\$0.01	\$0.00	\$0.00
Organization/Area Burden	\$0.06	\$0.06	\$0.03	\$0.07
Subtotal Direct Labor	\$0.40	\$0.40	\$0.19	\$0.42
Other Direct				
Services	\$0.18	\$0.23	\$0.57	\$0.13
Materials	\$0.09	\$0.06	\$0.12	\$0.06
Utilities	\$0.01	\$0.00	\$0.00	\$0.00
Other Expenses (b)	\$0.01	\$0.00	\$0.00	\$0.01
Recharges (c)	\$0.02	\$0.06	\$0.01	\$0.05
Travel	\$0.01	\$0.01	\$0.00	\$0.01
Subtotal Other Direct	\$0.33	\$0.37	\$0.71	\$0.26
Total Direct	\$0.73	\$0.77	\$0.90	\$0.68
INDIRECT				
Procurement	\$0.01	\$0.01	\$0.02	\$0.01
Travel	\$0.00	\$0.00	\$0.00	\$0.00
G&A (Other Inst.)	\$0.26	\$0.22	\$0.08	\$0.30
Total Indirect	\$0.27	\$0.23	\$0.10	\$0.32
TOTAL EXPENSES	\$1.00	\$1.00	\$1.00	\$1.00

(a) UC Labor includes salary and benefits for Scientists/Engineers, Admin., Students/GSRAs and Campus Labor.
 (b) Includes misc. expenses (stipends, sales tax, freight, etc.)
 (c) Distributed activities used by direct funded programs. Includes recharges credited back to direct operating accounts such as ALS and ESnet.

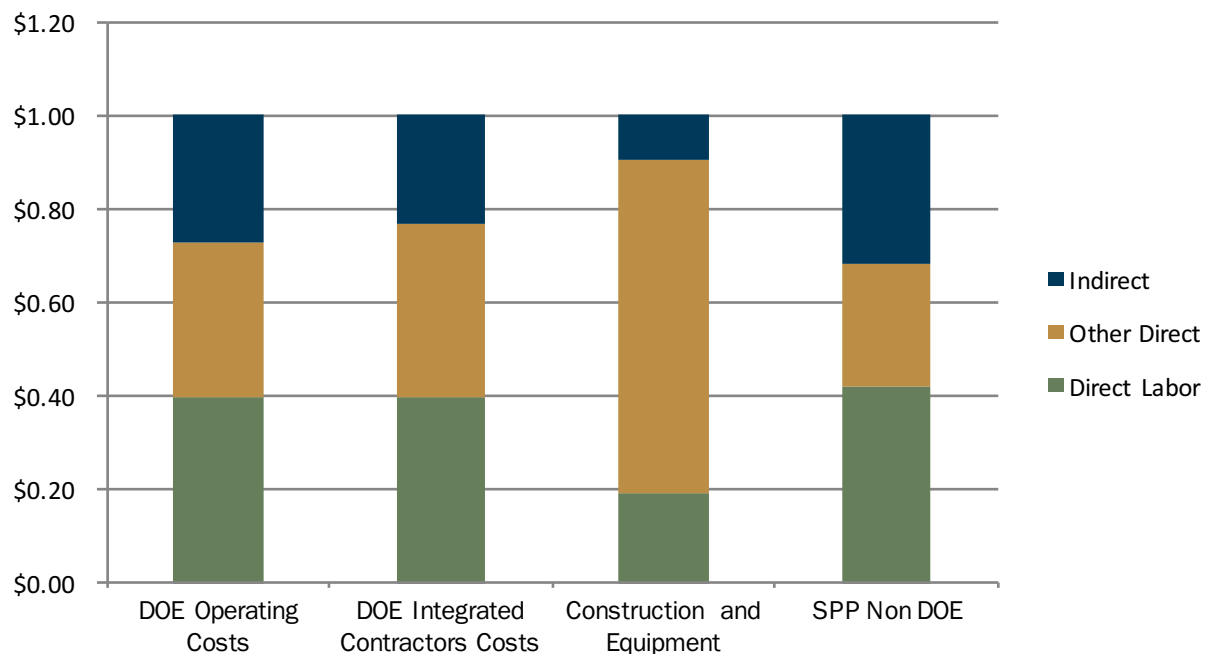


Table 1.1

Cost Trends by Expense Category, FY2013-FY2017 (\$M and % of Total)

Expenses	FY2013		FY2014		FY2015		FY2016		FY2017	
	\$M	%	\$M	%	\$M	%	\$M	%	\$M	%
DIRECT										
Direct Labor										
UC Labor (a)	273.2	33.4%	274.8	35.0%	277.4	34.2%	275.1	33.3%	283.1	33.0%
Contract Labor	0.7	0.1%	0.4	0.0%	0.4	0.0%	1.3	0.2%	1.0	0.1%
Organization/Area Burden	42.4	5.2%	42.4	5.4%	42.8	5.3%	47.5	5.7%	48.2	5.6%
Subtotal Direct Labor	316.4	38.6%	317.6	40.5%	320.5	39.5%	323.9	39.2%	332.3	38.7%
Other Direct										
Services	183.3	22.4%	150.8	19.2%	150.2	18.5%	158.1	19.1%	174.3	20.3%
Materials	79.0	9.6%	71.1	9.1%	82.6	10.2%	77.9	9.4%	77.2	9.0%
Utilities	7.8	1.0%	9.2	1.2%	9.6	1.2%	6.9	0.8%	6.8	0.8%
Other Expenses (b)	3.4	0.4%	3.6	0.5%	5.7	0.7%	5.6	0.7%	5.5	0.6%
Recharges (c)	22.8	2.8%	23.4	3.0%	21.9	2.7%	23.3	2.8%	22.4	2.6%
Travel	12.5	1.5%	12.2	1.6%	11.8	1.5%	12.7	1.5%	11.9	1.4%
Subtotal Other Direct	308.8	37.7%	270.2	34.4%	281.8	34.7%	284.6	34.4%	298.1	34.7%
Total Direct	625.2	76.3%	587.8	74.9%	602.3	74.2%	608.5	73.6%	630.4	73.5%
Indirect										
Procurement	9.3	1.1%	8.5	1.1%	9.2	1.1%	9.6	1.2%	9.6	1.1%
Travel	1.4	0.2%	1.3	0.2%	0.9	0.1%	1.0	0.1%	1.1	0.1%
G&A (Other Inst.)	183.3	22.4%	187.3	23.9%	198.9	24.5%	207.8	25.1%	217.0	25.3%
Total Indirect	194.1	23.7%	197.1	25.1%	209.0	25.8%	218.4	26.4%	227.7	26.5%
TOTAL EXPENSES	819.2	100.0%	784.9	100.0%	811.3	100.0%	826.9	100.0%	858.1	100.0%
Note: Minor variances may occur due to rounding. (a) UC Labor includes salary and benefits for Scientists/Engineers, Admin., Students/GSRAs and Campus Labor. (b) Includes misc. expenses (stipends, sales tax, freight, etc.) (c) Distributed activities used by direct funded programs. Includes recharges credited back to direct operating accounts such as ALS and ESnet.										

Table 1.2

Cost By Direct Funding Source by Division, FY2013 - FY2017 (\$K)

Division	FY2013	FY2014	FY2015	FY2016	FY2017
Biosciences (a)	178,265	175,688	174,901	169,850	170,286
Biological Systems & Engineering	-	-	-	45,702	43,767
Environmental Genomics & System Biology	-	-	-	17,744	15,834
Genomics	7,419	7,036	7,963	-	-
Joint Genome Institute	67,646	71,014	73,127	68,915	71,642
Life Sciences	41,123	34,852	30,132	-	-
Molecular Biophysics & Integrated Bioimaging	-	-	-	37,489	39,043
Physical Biosciences	62,076	62,787	63,680	-	-
Computing Sciences (b)	139,536	134,324	167,127	158,354	172,732
Computational Research	-	-	32,171	35,563	37,666
Computing Sciences	139,536	134,324	-	-	-
National Energy Research Scientific Computing Center	-	-	93,768	80,041	95,180
Scientific Networking	-	-	41,189	42,749	39,886
Directorate & Operations	42,955	19,393	17,032	23,135	42,947
Environment, Health, and Safety	1,518	51	34	31	29
Facilities	36,455	11,571	9,323	14,098	33,231
Information Technology	2,081	2,550	2,306	3,128	4,200
Laboratory Directorate	1,394	1,310	173	316	219
Other	64	51	106	123	162
Public Affairs	-	-	1,422	1,520	1,459
Protective Services	1,442	3,860	3,670	3,919	3,648
Earth & Environmental Sciences (c)	57,319	58,125	64,683	65,537	65,432
Climate & Ecosystems	-	-	-	36,519	36,659
Earth Sciences	57,319	58,125	64,683	-	-
Energy Geosciences	-	-	-	29,019	28,774

Note: Minor variances may occur due to rounding.

(a) Biosciences reorganized in FY2016, forming Biological Systems & Engineering, Environmental Genomics & System Biology, Joint Genome Institute, and Molecular Biophysics & Integrated Bioimaging.

(b) Computing Sciences reorganized in FY2015, forming Computational Research, National Energy Research Scientific Computing Center, Scientific Networking in FY2015.

(c) Environmental Sciences reorganized in FY2016, forming Climate & Ecosystems and Energy Geosciences.

continued...

Table 1.2 Continued

Cost By Direct Funding Source by Division, FY2013 - FY2017 (\$K) Continued

Division	FY2013	FY2014	FY2015	FY2016	FY2017
Energy Sciences (d)	175,457	174,961	157,831	163,012	164,136
Advanced Light Source	74,850	69,647	60,233	65,578	73,900
Chemical Sciences	22,298	27,281	24,737	28,478	26,702
Material Sciences	78,309	78,034	72,860	68,955	31,553
Molecular Foundry	-	-	-	-	31,981
Energy Technologies (e)	103,779	107,543	106,834	107,666	113,137
Building Technologies & Urban Systems	-	-	-	33,893	38,218
Cyclotron Road	-	-	-	1,739	2,937
Energy Analysis & Environmental Impacts	-	-	-	42,576	40,649
Energy Storage & Distributed Resources	-	-	-	29,458	31,333
Energy Technologies	103,779	107,543	106,834	-	-
Physical Sciences	121,930	114,883	122,867	139,346	129,444
Accelerator Technology & Applied Physics	31,520	28,562	32,470	38,772	43,590
Engineering	4,934	5,151	4,549	2,223	1,375
Nuclear Science	37,193	32,397	33,439	33,681	32,130
Physics	48,283	48,773	52,409	64,669	52,349
DIVISION TOTAL	819,242	784,917	811,276	826,899	858,115

Note: Minor variances may occur due to rounding.

(d) Energy Sciences reorganized in FY2017, forming Molecular Foundry Division (formerly in Materials Sciences Division).

(e) Energy Technologies reorganized in FY2016, forming Building Technology & Urban Systems, Cyclotron Road, Energy Analysis & Environmental Impacts, and Energy Storage & Distributed Resources.

Table 1.2a

Costs by Direct Funding Source by Area and Division, FY2017 (\$K)

Division	FY2017						
	DOE Operating	DOE Integrated Contractors Costs	WFO Federal	WFO Non-Federal	Operating Subtotal	Capital and Equipment	Total
Biosciences (a)	126,222	969	26,570	15,680	169,441	845	170,286
Biological Systems & Engineering	32,152	120	6,671	4,824	43,767	-	43,767
Environmental Genomics & System Biology	6,435	-	6,313	3,086	15,834	-	15,834
Joint Genome Institute	70,546	-	-	251	70,797	845	71,642
Molecular Biophysics & Integrated Bioimaging	17,089	849	13,586	7,519	39,043	-	39,043
Computing Sciences (b)	154,620	14,021	3,735	356	172,732	-	172,732
Computational Research	26,290	9,461	1,725	190	37,666	-	37,666
National Energy Research Scientific Computing Center	92,953	169	1,995	62	95,180	-	95,180
Scientific Networking	35,377	4,390	15	104	39,886	-	39,886
Directorate & Operations	24,912	567	1	-	25,481	17,466	42,947
Environment, Health, and Safety	29	-	-	-	29	-	29
Facilities	15,773	-	-	-	15,773	17,459	33,231
Information Technology	3,861	338	-	-	4,200	-	4,200
Laboratory Directorate	150	67	1	-	219	-	219
Other	-	162	-	-	162	-	162
Protective Services	3,641	-	-	-	3,641	8	3,648
Public Affairs	1,459	-	-	-	1,459	-	1,459
Earth & Environmental Sciences (c)	52,165	5,080	1,299	6,721	65,265	167	65,432
Climate & Ecosystems	30,998	3,506	735	1,252	36,491	167	36,659
Energy Geosciences	21,167	1,574	564	5,468	28,774	-	28,774

Note: Minor variances may occur due to rounding.
(a) Biosciences reorganized in FY2016, forming Biological Systems & Engineering, Environmental Genomics & System Biology, Joint Genome Institute, and Molecular Biophysics & Integrated Bioimaging.
(b) Computing Sciences reorganized in FY2015, forming Computational Research, National Energy Research Scientific Computing Center, and Scientific Networking.
(c) Earth and Environmental Sciences reorganized in FY2016, forming Climate & Ecosystems and Energy Geosciences.

continued...

Table 1.2a Continued

Costs by Direct Funding Source by Area and Division, FY2017 (\$K) Continued

Division	FY2017						
	DOE Operating	DOE Integrated Contractors Costs	WFO Federal	WFO Non- Federal	Operating Subtotal	Capital and Equipment	Total
Energy Sciences (d)	145,620	578	2,382	9,845	158,425	5,711	164,136
Advanced Light Source	67,228	135	11	1,692	69,066	4,834	73,900
Chemical Sciences	25,586	69	9	1,038	26,702	-	26,702
Material Sciences	24,648	162	-	6,743	31,553	(0)	31,553
Molecular Foundry	28,158	212	2,362	372	31,104	877	31,981
Energy Technologies (e)	85,644	1,748	6,404	19,341	113,137	-	113,137
Building Technologies & Urban Systems	28,346	59	1,873	7,941	38,218	-	38,218
Cyclotron Road	2,932	-	5	-	2,937	-	2,937
Energy Analysis & Environmental Impacts	28,659	979	3,407	7,605	40,649	-	40,649
Energy Storage & Distributed Resources	25,707	710	1,120	3,796	31,333	-	31,333
Physical Sciences	68,019	18,480	7,740	5,425	99,664	29,780	129,444
Accelerator Technology & Applied Physics	17,848	17,647	-	2,158	37,652	5,938	43,590
Engineering	-	218	65	977	1,260	115	1,375
Nuclear Science	21,153	168	7,080	2,118	30,519	1,610	32,130
Physics	29,018	448	595	172	30,232	22,117	52,349
DIVISION TOTAL	657,202	41,444	48,131	57,368	804,145	53,970	858,115
Note: Minor variances may occur due to rounding.							
(d) Energy Sciences reorganized in FY2017, forming Molecular Foundry Division (formerly in Materials Sciences Division).							
(e) Energy Technologies reorganized in FY2016, forming Building Technologies & Urban Systems, Cyclotron Road, Energy Analysis & Environmental Impacts, and Energy Storage & Distributed Resources.							

Table 1.2b

Costs by Direct Funding Source by Area and Division, FY2016 (\$K)

Division	FY2016						Total
	DOE Operating	DOE Integrated Contractors Costs	WFO Federal	WFO Non-Federal	Operating Subtotal	Capital and Equipment	
Biosciences (a)	127,768	302	26,161	15,619	169,850	-	169,850
Biological Systems & Engineering	35,876	117	5,794	3,916	45,702	-	45,702
Environmental Genomics & System Biology	6,250	-	6,521	4,972	17,744	-	17,744
Joint Genome Institute	68,218	-	-	697	68,915	-	68,915
Molecular Biophysics & Integrated Bioimaging	17,425	185	13,845	6,034	37,489	-	37,489
Computing Sciences (b)	143,950	6,206	2,738	797	153,691	4,662.13	158,354
Computational Research	30,820	1,481	2,706	556	35,563	-	35,563
National Energy Research Scientific Computing Center	74,841	347	-	192	75,379	4,662	80,041
Scientific Networking	38,289	4,378	32	50	42,749	-	42,749
Directorate & Operations	18,392	123	-	-	18,515	4,619.57	23,135
Environment, Health, and Safety	31	-	-	-	31	-	31
Facilities	9,540	-	-	-	9,540	4,557	14,098
Information Technology	3,128	-	-	-	3,128	-	3,128
Laboratory Directorate	316	-	-	-	316	-	316
Other	-	123	-	-	123	-	123
Protective Services	3,857	-	-	-	3,857	62	3,919
Public Affairs	1,520	-	-	-	1,520	-	1,520
Earth & Environmental Sciences (c)	52,641	3,103	1,450	8,065	65,259	278.15	65,537
Climate & Ecosystems	30,751	2,930	871	1,692	36,243	275	36,519
Energy Geosciences	21,890	174	579	6,373	29,016	3	29,019
Energy Sciences	142,723	1,277	2,892	8,159	155,052	7,960.00	163,012
Advanced Light Source	58,538	557	14	1,418	60,527	5,052	65,578
Chemical Sciences	27,694	84	82	619	28,478	-	28,478
Material Sciences	56,492	636	2,797	6,122	66,047	2,908	68,955
Energy Technologies (d)	80,143	1,508	8,499	17,499	107,650	15.48	107,666
Building Technologies & Urban Systems	24,337	34	2,651	6,870	33,893	-	33,893
Cyclotron Road	1,694	-	45	-	1,739	-	1,739
Energy Analysis & Environmental Impacts	30,118	291	5,004	7,149	42,561	15	42,576
Energy Storage & Distributed Resources	23,994	1,183	800	3,480	29,458	-	29,458
Physical Sciences	87,897	10,809	7,983	6,441	113,130	26,215.90	139,346
Accelerator Technology & Applied Physics	19,459	9,631	-	3,143	32,233	6,540	38,772
Engineering	-	342	247	1,632	2,220	3	2,223
Nuclear Science	21,787	109	7,491	1,520	30,908	2,773	33,681
Physics	46,651	727	245	146	47,769	16,900	64,669
DIVISION TOTAL	653,515	23,328	49,724	56,581	783,148	43,751	826,899

Note: Minor variances may occur due to rounding.

(a) Biosciences reorganized in FY2016, forming Biological Systems & Engineering, Environmental Genomics & System Biology, Joint Genome Institute, and Molecular Biophysics & Integrated Bioimaging.

(b) Computing Sciences reorganized in FY2015, forming Computational Research, National Energy Research Scientific Computing Center, Scientific Computing Center.

(c) Earth and Environmental Sciences reorganized in FY16, forming Climate & Ecosystems and Energy Geosciences.

(d) Energy Technologies reorganized in FY2016, forming Building Technologies & Urban Systems, Cyclotron Road, Energy Analysis & Environmental Impacts, and Energy Storage & Distributed Resources.

Table 1.2c

Costs by Direct Funding Source by Area and Division, FY2015 (\$K)

Division	FY2015						
	DOE Operating	DOE Integrated Contractors Costs	WFO Federal	WFO Non-Federal	Operating Subtotal	Capital and Equipment	Total
Biosciences (a)	128,701	646	31,014	14,541	174,901	-	174,901
Genomics - JGI	72,528	-	-	599	73,127	-	73,127
Genomics	10	-	5,062	2,891	7,963	-	7,963
Life Sciences	4,707	151	21,329	3,944	30,132	-	30,132
Physical Biosciences	51,456	494	4,623	7,106	63,680	-	63,680
Computing Sciences (b)	161,713	2,867	2,225	322	167,127	-	167,127
Computational Research	29,272	430	2,199	270	32,171	-	32,171
National Energy Research Scientific Computing Center	93,758	9	-	-	93,768	-	93,768
Scientific Networking Division	38,682	2,428	26	53	41,189	-	41,189
Directorate & Operations	14,069	106	-	-	14,174	2,858	17,032
Environment, Health, and Safety	34	-	-	-	34	-	34
Facilities	6,979	-	-	-	6,979	2,344	9,323
Information Technology	2,306	-	-	-	2,306	-	2,306
Lab Directorate	173	-	-	-	173	-	173
Other	-	106	-	-	106	-	106
Protective Services	3,155	-	-	-	3,155	514	3,670
Public Affairs	1,422	-	-	-	1,422	-	1,422
Earth & Environmental Sciences (c)	48,624	3,988	1,955	9,358	63,925	758	64,683
Earth Sciences	48,624	3,988	1,955	9,358	63,925	758	64,683
Energy Sciences	140,663	1,249	3,125	8,616	153,653	4,177	157,831
Advanced Light Source	53,892	623	6	1,536	56,056	4,177	60,233
Chemical Sciences	23,949	33	151	605	24,737	-	24,737
Materials Sciences	62,823	593	2,969	6,476	72,860	0	72,860
Energy Technologies (d)	80,840	1,051	10,436	13,623	105,950	884	106,834
Energy Technologies	80,840	1,051	10,436	13,623	105,950	884	106,834
Physical Sciences	92,659	9,387	8,279	4,785	115,111	7,756	122,867
Accelerator Technology & Applied Physics	18,067	7,209	-	948	26,223	6,247	32,470
Engineering	-	1,567	443	2,390	4,401	148	4,549
Nuclear Science	22,799	247	7,836	1,291	32,173	1,266	33,439
Physics	51,794	364	-	156	52,314	95	52,409
DIVISION TOTAL	667,268	19,292	57,036	51,245	794,842	16,435	811,276

Note: Minor variances may occur due to rounding.

(a) Biosciences reorganized in FY2016, forming Biological Systems & Engineering, Environmental Genomics & System Biology, Joint Genome Institute, and Molecular Biophysics & Integrated Bioimaging.

(b) Computing Sciences reorganized in FY2015, forming Computational Research, National Energy Research Scientific Computing Center, and Scientific Networking.

(c) Earth and Environmental Sciences reorganized in FY16, forming Climate & Ecosystems and Energy Geosciences.

(d) Energy Technologies reorganized in FY2016, forming Building Technologies & Urban Systems, Cyclotron Road, Energy Analysis & Environmental Impacts, and Energy Storage & Distributed Resources.

Table 1.2d

Costs by Direct Funding Source by Area and Division, FY2014 (\$K)

Division	FY2014						
	DOE Operating	DOE Integrated Contractors Costs	WFO Federal	WFO Non-Federal	Operating Subtotal	Capital and Equipment	Total
Biosciences (a)	126,537	680	34,120	13,278	174,615	1,072	175,688
Genomics	-	-	4,264	2,772	7,036	-	7,036
Genomics - JGI	70,474	-	-	539	71,014	-	71,014
Life Sciences	6,235	40	24,350	4,227	34,852	-	34,852
Physical Biosciences	49,828	640	5,507	5,739	61,715	1,072	62,787
Computing Sciences (b)	121,889	3,719	3,237	457	129,303	5,020	134,324
Computing Sciences	121,889	3,719	3,237	457	129,303	5,020	134,324
Directorate & Operations	11,173	62	-	128	11,363	8,030	19,393
Environment, Health, and Safety	42	7	-	-	49	2	51
Facilities	4,058	-	-	-	4,058	7,512	11,571
Information Technology	2,422	-	-	128	2,550	-	2,550
Protective Services	3,345	-	-	-	3,345	516	3,860
Lab Directorate	1,306	4	-	-	1,310	-	1,310
Other	-	51	-	-	51	-	51
Earth & Environmental Sciences (c)	42,308	2,930	2,533	10,281	58,053	72	58,125
Earth Sciences	42,308	2,930	2,533	10,281	58,053	72	58,125
Energy Sciences	148,948	496	4,233	12,416	166,092	8,869	174,961
Advanced Light Source	59,289	269	-	1,222	60,781	8,866	69,647
Chemical Sciences	23,705	-	1,722	1,854	27,281	-	27,281
Materials Sciences	65,954	227	2,511	9,340	78,031	3	78,034
Energy Technologies (d)	82,580	1,768	9,001	14,194	107,543	-	107,543
Environmental Energy Technologies	82,580	1,768	9,001	14,194	107,543	-	107,543
Physical Sciences	84,588	9,229	7,600	5,030	106,448	8,435	114,883
Accelerator & Fusion Research	16,896	3,989	-	1,068	21,954	6,608	28,562
Engineering	163	2,307	531	2,139	5,140	11	5,151
Nuclear Science	19,424	2,547	7,069	1,541	30,582	1,816	32,397
Physics	48,105	385	(0)	282	48,773	-	48,773
DIVISION TOTAL	618,024	18,884	60,725	55,785	753,418	31,499	784,917

Note: Minor variances may occur due to rounding.

(a) Biosciences reorganized in FY2016, forming Biological Systems & Engineering, Environmental Genomics & System Biology, Joint Genome Institute, and Molecular Biophysics & Integrated Bioimaging.

(b) Computing Sciences reorganized in FY2015, forming Computational Research, National Energy Research Scientific Computing Center, Scientific Computing Center.

(c) Earth and Environmental Sciences reorganized in FY2016, forming Climate & Ecosystems and Energy Geosciences.

(d) Energy Technologies reorganized in FY2016, forming Building Technologies & Urban Systems, Cyclotron Road, Energy Analysis & Environmental Impacts, and Energy Storage & Distributed Resources.

Table 1.2e

Costs by Direct Funding Source by Area and Division, FY2013 (\$K)

Division	FY2013						
	DOE Operating	DOE Integrated Contractors Costs	WFO Federal	WFO Non-Federal	Operating Subtotal	Capital and Equipment	Total
Biosciences (a)	126,410	453	37,135	13,432	177,431	834	178,265
Genomics	1	-	4,894	2,525	7,419	-	7,419
Genomics - JGI	67,048	-	-	598	67,646	-	67,646
Life Sciences	8,081	-	28,444	4,578	41,104	19	41,123
Physical Biosciences	51,280	453	3,797	5,731	61,261	815	62,076
Computing Sciences (b)	129,882	841	1,825	1,387	133,935	5,601	139,536
Computing Sciences	129,882	841	1,825	1,387	133,935	5,601	139,536
Directorate & Operations	7,136	114	-	150	7,399	35,556	42,955
Environment, Health, and Safety	1,480	-	-	-	1,480	39	1,518
Facilities	938	-	-	-	938	35,517	36,455
Information Technology	1,931	-	-	150	2,081	-	2,081
Protective Services	1,442	-	-	-	1,442	-	1,442
Lab Directorate	1,345	49	-	-	1,394	-	1,394
Other	-	64	-	-	64	-	64
Earth & Environmental Sciences (c)	42,882	3,353	1,869	9,214	57,319	-	57,319
Earth Sciences	42,882	3,353	1,869	9,214	57,319	-	57,319
Energy Sciences	144,738	699	3,631	11,788	160,856	14,601	175,457
Advanced Light Source	61,368	91	-	963	62,422	12,428	74,850
Chemical Sciences	18,867	94	1,438	1,898	22,298	-	22,298
Materials Sciences	64,502	514	2,193	8,927	76,136	2,173	78,309
Energy Technologies (d)	74,587	2,365	9,142	17,571	103,666	114	103,779
Environmental Energy Technologies	74,587	2,365	9,142	17,571	103,666	114	103,779
Physical Sciences	87,334	9,712	8,935	3,772	109,753	12,177	121,930
Accelerator & Fusion Research	19,768	1,869	731	541	22,909	8,611	31,520
Engineering	128	2,232	950	1,073	4,382	552	4,934
Nuclear Science	20,283	5,311	6,650	2,009	34,253	2,940	37,193
Physics	47,155	300	604	149	48,209	74	48,283
DIVISION TOTAL	612,968	17,537	62,538	57,315	750,359	68,882	819,242

Note: Minor variances may occur due to rounding.

(a) Biosciences reorganized in FY2016, forming Biological Systems & Engineering Environmental Genomics & System Biology, Joint Genome Institute, and Molecular Biophysics & Integrated Bioimaging.

(b) Computing Sciences broken out into Computational Research, National Energy Research Scientific Computing Center, Scientific Networking in FY2015.

(c) Earth and Environmental Sciences reorganized in FY2016, forming Climate & Ecosystems and Energy Geosciences.

(d) Energy Technologies reorganized in FY2016, forming Building Technologies & Urban Systems, Cyclotron Road, Energy Analysis & Environmental Impacts, and Energy Storage & Distributed Resources.

Table 1.3

Indirect Budget Costs by Area and Division, FY2017 (\$K)

Division/Area	Distributed Support Costs			Institutional Costs						Total (a)
	Area/ Org. Burden	Service Centers (b)	Other (c)	LDRD	IGPP	G&A	Procurement Burden	Site Support	Travel Burden	
Biosciences	12,398	12,917		4,460						29,775
Biological Systems & Engineering		6,471		1,223						7,695
Bioscience Area Office	12,398	684								13,082
Environmental Genomics & System Biology				1,855						1,855
Joint Genome Institute		4,429		249						4,678
Molecular Biophysics & Integrated Bioimaging		1,333		1,133						2,466
Computing Sciences	6,887	3,387		4,375						14,649
Computational Research	2,354			4,375						6,729
Computing Sciences ALD	3,329	3,387								6,716
National Energy Research Scientific Computing Center	895									895
Scientific Networking	309									309
Directorate & Operations	8,065	21,319			13,560	86,444	13,993	96,716	1,398	241,497
Chief Financial Officer		92				8,646	12,060		1,398	22,196
Environment, Health, Safety & Security								21,733		21,733
Facilities	5,082	9,337			13,560		1,934	65,217		95,130
Human Resources		3,456				9,651				13,107
Information Technology	2,983	6,537				32,466				41,985
Laboratory Directorate		847				19,727		385		20,958
Operations						5,209				5,209
Other (d)						7,869				7,869
Protective Services								9,381		9,381
Public Affairs		1,051				2,877				3,928

Note: Minor variances may occur due to rounding.

(a) Summation of indirect budget costs provided only to show magnitude of dollars being managed and does not equate to total indirect costs since there are overlaps between indirect budgets. For example, some organization burden costs are included in G&A and Recharges.

(b) Service Centers includes recharge cost centers that default to B&R YN01 (project type OHRCH) only and GSRA pass through cost.

(c) Includes: LBNL's Office of Homeland Security (formerly known as Nuclear Non-Proliferation).

(d) Includes: UC Management Fee (General Laboratory).

continued...

Table 1.3 Continued

Indirect Budget Costs by Area and Division, FY2017 (\$K) Continued

Division/Area	Distributed Support Costs			Institutional Costs						Total (a)
	Area/ Org. Burden	Service Centers (b)	Other (c)	LDRD	IGPP	G&A	Procurement Burden	Site Support	Travel Burden	
Earth & Environmental Sciences	4,450	83		3,770				20		8,324
Climate & Ecosystems				1,931						1,931
Earth & Environmental Science ALD	4,450	83						20		4,553
Energy Geosciences				1,839						1,839
Energy Sciences	8,875	200		4,351						13,426
Advanced Light Source	2,431			1,267						3,698
Chemical Sciences	2,084			953						3,037
Energy Sciences ALD	531									531
Material Sciences	2,230	200		1,285						3,715
Molecular Foundry	1,599			845						2,444
Energy Technologies	8,233	3,064		2,434						13,731
Building Technologies & Urban Systems		1,141		742						1,883
Cyclotron Road										-
Energy Analysis Environmental Impact		1,138		155						1,293
Energy Storage & Distributed Resources		785		1,537						2,322
ETA Area Office	8,233									8,233
Physical Sciences	10,771	1,309	221	6,010		1,269		1,583		21,163
Accelerator Technology & Applied Physics	1,709	50		1,808						3,567
Engineering	5,062	1,260		854		1,269		1,583		10,028
Nuclear Science	1,747	0	221	1,630						3,598
Physics	1,805			1,718						3,523
Physical Sciences ALD	448									448
TOTAL	59,678	42,280	221	25,401	13,560	87,713	13,993	98,319	1,398	342,564

Note: Minor variances may occur due to rounding.

(a) Summation of indirect budget costs provided only to show magnitude of dollars being managed and does not equate to total indirect costs since there are overlaps between indirect budgets. For example, some organization burden costs are included in G&A and Recharges.

(b) Service Centers includes recharge cost centers that default to B&R YN01 (project type OHRCH) only and GSRA pass through cost.

(c) Includes: LBNL's Office of Homeland Security (formerly known as Nuclear Non-Proliferation).

Table 1.4

Average FTE Breakdown by Area and Division, FY2017

Division/Area	Direct Funded FTEs				Indirect Funded FTEs				Total FTEs
	DOE Direct Operating	Other Direct Operating (a)	Capital & Equipment	Direct Funded Total	Area/ORG Burden	Service Centers (b)	Operations Overhead (c)	Indirect Funded Total	
Biosciences	357.2	127.5	-	484.7	73.6	18.3	18.5	110.4	595.1
Biological Systems & Engineering	98.7	42.1	-	140.8	-	6.8	4.0	10.8	151.6
Bioscience Area Office	0.0	-	-	0.0	73.6	4.3	0.2	78.0	78.0
Environmental Genomics & System Biology	50.4	27.0	-	77.4	-	-	5.9	5.9	83.3
Joint Genome Institute	189.2	1.2	-	190.4	-	1.0	2.9	3.9	194.4
Molecular Biophysics & Integrated Bioimaging	18.9	57.1	-	76.0	-	6.2	5.6	11.7	87.8
Computing Sciences	206.8	33.0	-	239.8	36.4	-	16.2	52.6	292.4
Computational Research	72.7	28.4	-	101.2	9.7	-	16.1	25.8	127.0
Computing Sciences ALD	-	-	-	-	17.3	-	0.1	17.4	17.4
National Energy Research Scientific Computing Center	85.9	3.2	-	89.2	6.8	-	-	6.8	95.9
Scientific Networking	48.2	1.3	-	49.5	2.6	-	-	2.6	52.1
Earth & Environmental Sciences	126.4	35.6	0.9	162.9	21.6	0.2	13.8	35.7	198.5
Climate & Ecosystems	74.6	16.8	0.9	92.3	-	-	8.5	8.5	100.8
Earth & Environmental Science ALD	-	-	-	-	21.6	0.2	0.4	22.3	22.3
Energy Geosciences	51.8	18.8	-	70.6	-	-	4.9	4.9	75.4
Energy Sciences	452.9	46.6	10.7	510.2	45.0	1.0	27.3	73.3	583.4
Advanced Light Source	173.9	3.3	10.7	187.9	10.4	-	10.6	21.0	208.9
Chemical Sciences	97.9	6.1	-	104.0	12.0	-	4.7	16.7	120.7
Energy Sciences ALD	-	-	-	-	2.5	-	-	2.5	2.5
Material Sciences	96.8	21.8	-	118.6	11.8	1.0	6.6	19.5	138.1
Molecular Foundry	84.2	15.4	0.0	99.7	8.3	-	5.3	13.6	113.3

Notes: Minor variances may occur due to rounding. FTEs are calculated based on translating labor hours charged into work-months and dividing by division's PLF factor. FTE calculation does not include Contract Labor or Campus Labor. Total FTE excludes 45.0 FTEs from non-contract projects (CSRUC, IJE, IPA, MLA, Royalties, and UC Construction Projects).

(a) Other Operating includes DOE Integrated Contractors, Non-DOE Fellowships, and CRADAs.

(b) Service Centers includes recharge cost centers that default to B&R YN01 (project type OHRCH) only.

(c) Operations Overhead includes: G&A, LDRD, Site Support, Payroll Burden, Procurement, Travel, IGPP, S&S, and LBNL's Office of Homeland Security.

continued...

Table 1.4 Continued

Average FTE Breakdown by Area and Division, FY2017 *Continued*

Division/Area	Direct Funded FTEs				Indirect Funded FTEs				Total FTEs
	DOE Direct Operating	Other Direct Operating (a)	Capital & Equipment	Direct Funded Total	Area/ ORG Burden	Service Centers (b)	Operations Overhead (c)	Indirect Funded Total	
Energy Technologies	208.7	72.8	-	281.5	39.4	20.4	12.8	72.6	354.1
Building Technologies & Urban Systems	57.3	27.3	-	84.6	-	7.3	2.6	9.9	94.5
Cyclotron Road	6.8	-	-	6.8	-	-	-	-	6.8
Energy Analysis Environmental Impact	77.8	30.2	-	108.1	-	8.4	2.9	11.3	119.3
Energy Storage & Distribution	63.3	14.7	-	78.1	-	4.7	7.0	11.7	89.8
ETA Area Office	3.5	0.6	-	4.1	39.4	-	0.3	39.7	43.8
Physical Sciences	188.4	63.2	41.0	292.6	51.0	6.3	32.5	89.8	382.4
Accelerator Technology & Applied Physics	46.1	36.8	20.4	103.2	9.2	0.1	6.7	16.0	119.2
Engineering	-	2.9	0.0	3.0	21.4	6.1	10.9	38.4	41.4
Nuclear Science	64.3	18.7	2.4	85.4	9.8	-	7.9	17.7	103.0
Physical Sciences ALD	-	-	-	-	1.3	-	-	1.3	1.3
Physics	78.0	4.8	18.3	101.1	9.4	-	7.0	16.4	117.5
Directorate & Operations	22.2	0.8	6.6	29.6	35.0	29.2	681.3	745.5	775.1
Chief Financial Officer	-	(0.1)	-	(0.1)	-	0.2	142.1	142.3	142.2
Environment, Health, Safety & Security	0.1	-	-	0.1	-	-	93.2	93.2	93.3
Facilities	7.8	-	6.6	14.5	22.7	1.9	186.5	211.2	225.6
Human Resources	-	-	-	-	-	-	53.0	53.0	53.0
Information Technology	7.1	0.8	-	7.9	12.3	18.8	91.8	122.8	130.7
Laboratory Directorate	0.6	0.1	-	0.8	-	2.2	63.1	65.3	66.1
Operations	-	-	-	-	-	-	21.4	21.4	21.4
Protective Services	5.2	-	-	5.2	-	-	14.9	14.9	20.2
Public Affairs	1.3	-	-	1.3	-	6.1	15.3	21.4	22.6
TOTAL	1,562.5	379.5	59.3	2,001.3	302.0	75.4	802.3	1,179.7	3,181.0

Notes: Minor variances may occur due to rounding. FTEs are calculated based on translating labor hours charged into work-months and dividing by division's PLF factor. FTE calculation does not include Contract Labor or Campus Labor. Total FTE excludes 45.0 FTEs from non-contract projects (CSRUC, IJE, IPA, MLA, Royalties, and UC Construction Projects).

(a) Other Operating includes DOE Integrated Contractors, Non-DOE Fellowships, and CRADAs.

(b) Service Centers includes recharge cost centers that default to B&R YN01 (project type OHRCH) only.

(c) Operations Overhead includes: G&A, LDRD, Site Support, Payroll Burden, Procurement, Travel, IGPP, S&S, and LBNL's Office of Homeland Security.

Table 1.5

Funds Held for Others Cost Trends, FY2013-FY2017 (\$K)

Funding Source	FY2013	FY2014	FY2015	FY2016	FY2017
Royalty	3,508	3,420	3,031	3,465	3,240
Contractor-Funded Institutional Supporting R&D & Gifts	3,164	3,381	3,826	4,026	3,050
Inter-Location Appointments (ILA)	2,198	3,215	4,093	3,664	2,957
UC Construction Projects	1,188	1,887	2,188	455	185
Other	79	109	192	20	252
Total	10,137	12,012	13,330	11,630	9,684

Note: UC Construction costs decreased by 79% (or \$1,733K) in FY 16, primarily due to the completion of CRT and SERC buildings.

2. DIRECT FUNDING — DOE & REIMBURSABLE WORK

Total Laboratory Funding

Total Laboratory Funding - \$948.2M

Laboratory funding increased \$50M to \$948M in FY2017, enabling Lawrence Berkeley National Laboratory to continue to bring science solutions to the world.

Office of Science provided \$15M of the increase with growth in Advanced Scientific Computing Research (\$12.5M), Biological and Environmental Research (\$9.8M) and Science Laboratories Infrastructure (\$9M). These increases were offset by decreases in several programs, most notably, Fusion (\$3M), which has been steadily declining in recent years, and High Energy Physics (HEP). While HEP continued to provide increased funding towards Major Items of Equipment (\$4M), including Dark Energy Spectroscopic Instrument (DESI) and LUX-ZEPLIN (LZ), the transfer of custodianship for the Sanford Underground Research Facility to Fermilab shifted \$20M in funding, resulting in a \$16M net decrease to the HEP program at LBNL.

Energy Efficiency and Renewable Energy (EERE) also provided significant funding in FY2017, accounting for \$15M of the Laboratory's overall increase. This growth was concentrated in two primary areas: The Agile Bio-Foundry (\$4.6M), funded by the Bioenergy Technologies Program, and the Solar Energy program, which doubled in FY2017 to nearly \$10M. Modest increases in funding for Advanced Manufacturing and Vehicle Technologies were offset by the slight decrease in Building Technologies.

Considerable increases in ARPA-E and Fossil Energy contributed to the overall increase in funding as well. ARPA E funding increased (\$6.2M) largely due to the ROOTS (Rhizosphere Observations Optimizing Terrestrial Sequestration) and SHIELD (Single-Pane Highly Insulating Efficient Lucid Designs) initiatives. Fossil Energy funding also increased in FY2017 by \$6.7M, a 92% increase over FY2016, primarily in the area of Carbon Storage.

Site infrastructure and managing Laboratory growth continue to be areas of focus, however funding in these areas remained relatively flat in FY2017. The Science Laboratories Infrastructure (SLI) Program at the Office of Science provided \$9M in General Purpose Plant funds for building systems renewal, while funding for the Integrative Genomics Building (IGB) remained flat at \$20M. The increase was offset by a decrease in Operating funds from Environmental Management (EM) for the demolition and restoration of the Old Town site (\$7.6M).

While funding from other Federal and Non-Federal spon-

sors remained relatively flat, the Laboratory experienced a significant increase in work with Integrated Contractors (\$18M), which is a 78% increase over FY2016. This was driven primarily by efforts related to the upgrade of the Linac Coherent Light Source (LCLS-II), as well as collaboration on the Exascale Computing Project.

Total Laboratory Costs - \$858.1M

Laboratory costs in FY2017 were \$858M, approximately \$31M greater than FY2016. This increase of nearly 4% is reflective of program growth and Capital investments at Lawrence Berkeley National Laboratory.

Office of Science costs increased by \$9M overall, largely in the area of Capital spending. This reflects an \$11M increase in spending related to the construction of the Integrative Genomics Building (IGB), funded by the Science Laboratories Infrastructure (SLI) Program, which broke ground in January 2017. Spending related to Major Items of Equipment increased as well due to investments in Dark Energy Spectroscopic Instrument (DESI) and LUX-ZEPLIN (LZ), which reached Critical Decision Step 3 (CD-3) in FY2016 and FY2017, respectively.

Office of Science Capital spending increases were partially offset by an overall reduction in Operating spending. While the Laboratory has continued to see steady growth in Advanced Scientific Computing, this was offset by a decrease in High Energy Physics, as the custodianship of Sanford Underground Research Facility (SURF) transferred to Fermilab in FY2017.

Modest spending increases in Energy Efficiency and Renewable Energy (EERE, \$4.6M) and Environmental Management (EM, \$6M) contributed to the overall increase, and were partially offset by a slight decrease in National Nuclear Security Administration (NNSA, \$3.7M).

Also notable was an \$18M increase in work with DOE Integrated Contractors, signaling a close collaboration with other Department of Energy Laboratories. This increase was driven primarily by efforts related to the upgrade of the Linac Coherent Light Source (LCLS-II) at Stanford Linear Accelerator Center, as well as the Laboratory's key role in the Exascale Computing Project, sponsored jointly by DOE Office of Science and National Nuclear Security Administration (NNSA).

Refer to Section 1, Institutional Information, for more information regarding how Program dollars were spent in FY2017.

Table 2.1

Berkeley Lab Funding Trends (BA) by Funding Source (\$K)

LBNL Fund Trends (BA) by Funding Source (\$K)	FY2013	FY2014	FY2015	FY2016	FY2017
DOE DIRECT OPERATING					
Administrator for National Nuclear Security Administration	14,399	7,187	14,130	13,369	10,853
Advanced Research Projects Agency - Energy	4,131	993	1,779	3,033	9,276
Assistant Secretary for Electricity Delivery & Energy Reliability	8,485	7,873	8,106	10,145	10,289
Assistant Secretary for Energy Efficiency and Renewable Energy	78,423	69,471	61,016	91,435	106,908
Assistant Secretary for Environmental Management	20,523	18,824	863	16,715	9,072
Assistant Secretary for Fossil Energy	5,215	6,384	7,799	7,263	13,972
Assistant Secretary for Nuclear Energy	2,930	3,040	2,414	2,519	3,596
Assistant Secretary for International Affairs	200	425	2,958	3,773	3,826
Loan Programs Office	15	(0)	-	-	-
Office of Energy and Threat	138	177	158	179	226
Office of Energy Policy & Systems Analysis	-	200	2,066	1,862	650
Office of Environment, Health, Safety and Security	34	48	1,540	310	40
Office of Indian Energy Policy & Programs	-	229	-	35	-
Office of Legacy Management	150	-	195	169	250
Office of Management	-	(1)	-	-	-
Office of Science	506,725	527,907	533,386	548,159	558,594
Office of the Chief Information Officer	-	-	-	200	-
Total DOE Direct Operating	641,370	642,758	636,409	699,165	727,551
OTHER DIRECT OPERATING (a)					
Federal Agencies	62,667	55,953	53,330	51,519	49,042
Non-Federal Sponsors (b)	57,737	51,967	55,066	52,376	55,063
Cooperative Research and Development Agreements	1,192	1,019	2,175	2,588	2,685
DOE Integrated Contractors (c)	17,537	18,884	19,292	23,328	41,444
Total Other Direct Operating	139,132	127,824	129,864	129,810	148,235
TOTAL OPERATING	780,502	770,582	766,274	828,975	875,786

Note: Minor variances may occur due to rounding.

Data Source: Budget Authority as provided in the Berkeley Lab final contract modification for the fiscal year.

(a) FY2013 ARRA National Institutes of Health (NIH) and National Science Foundation (NSF) awards were obligated to Berkeley Lab by DOE as work for a Non-Federal entity to accommodate OMB apportionment requirements for ARRA. For reporting consistency with prior and future years, all NIH and NSF funding and cost data is reflected under the Work for Other Federal Agencies category.

(b) Includes both funding and deobligations for Non-Federal Sponsors who are precluded by law from paying an advance under the WN02 program.

(c) Total funding for Integrated Contractors is assumed to be equal to cost incurred.

continued...

Table 2.1 Continued

Berkeley Lab Funding Trends (BA) by Funding Source (\$K) Continued

LBNL Fund Trends (BA) by Funding Source (\$K)	FY2013	FY2014	FY2015	FY2016	FY2017
DOE PLANT AND CAPITAL EQUIPMENT					
Basic Equipment/Major Items of Equipment					
Administrator for National Nuclear Security Administration	(0)	-	2,570	1,375	1,428
Assistant Secretary for Energy Efficiency and Renewable Energy	-	(0)	900	990	-
Office of Science	11,081	12,514	14,076	39,889	39,915
Total DOE Capital Equipment	11,080	12,514	17,546	42,254	41,342
General Plant Projects					
Office of Science	1,250	(13)	(0)	-	9,000
Accelerator Improvement Projects					
Office of Science	550	1,250	1,800	1,000	2,000
Line-Item Construction					
Assistant Secretary for Energy Efficiency and Renewable Energy	-	-	(0)	-	-
Office of Science	(2)	(8)	12,090	25,250	20,098
Total DOE Plant	1,798	1,228	13,890	26,250	31,098
TOTAL DOE PLANT AND CAPITAL EQUIPMENT	12,878	13,742	31,436	68,504	72,440
TOTAL LABORATORY	793,380	784,324	797,710	897,479	948,226

Table 2.2

Berkeley Lab Cost Trends by Funding Source (\$K)

LBNL Cost Trends by Funding Source (\$K)	FY2013	FY2014	FY2015	FY2016	FY2017
DOE DIRECT OPERATING					
Administrator for National Nuclear Security Administration	9,310	9,886	11,764	13,698	11,404
Advanced Research Projects Agency - Energy	3,651	3,074	1,609	1,614	2,623
Assistant Secretary for Electricity Delivery & Energy Reliability	7,479	8,517	9,635	9,136	8,639
Assistant Secretary for Energy Efficiency and Renewable Energy	68,584	75,239	73,493	76,135	80,750
Assistant Secretary for Environmental Management	2,138	5,327	7,828	9,858	15,987
Assistant Secretary for Fossil Energy	9,817	6,586	8,020	8,037	8,083
Assistant Secretary for Nuclear Energy	3,072	2,574	2,359	2,728	2,096
Assistant Secretary for International Affairs	76	330	189	1,461	2,865
Loan Programs Office	15	-	-	-	-
Office of Energy and Threat	164	168	174	182	167
Office of Energy Policy & Systems Analysis	-	200	419	2,296	934
Office of Environment, Health, Safety and Security	40	35	229	1,264	388
Office of Indian Energy Policy & Programs	-	-	128	134	1
Office of Legacy Management	-	123	119	215	58
Office of Management	-	-	-	-	-
Office of Science	508,623	505,965	551,302	526,749	523,098
Office of the Chief Information Officer	-	-	-	8	110
Total DOE Direct Operating	612,968	618,024	667,268	653,515	657,202
OTHER DIRECT OPERATING					
Federal Agencies	62,538	60,725	57,036	49,724	48,131
Non-Federal Sponsors (a)	56,111	54,690	49,131	54,112	54,923
Cooperative Research and Development Agreements	1,204	1,095	2,114	2,469	2,446
DOE Integrated Contractors	17,537	18,884	19,292	23,328	41,444
Total Other Direct Operating	137,391	135,394	127,573	129,633	146,943
TOTAL OPERATING	750,359	753,418	794,841	783,148	804,145
Basic Equipment/Major Items of Equipment					
Administrator for National Nuclear Security Administration	-	-	716	3,021	1,597
Assistant Secretary for Energy Efficiency and Renewable Energy	742	-	884	1,005	(0)
Office of Science	24,773	20,004	9,855	28,759	32,334
Total DOE Capital Equipment	25,515	20,004	11,456	32,785	33,930
General Plant Projects					
Office of Science	1,769	552	514	62	2,009
Accelerator Improvement Projects					
Office of Science	6,622	3,430	2,120	2,345	731
Line-Item Construction					
Assistant Secretary for Energy Efficiency and Renewable Energy	8,262	3,991	170	-	-
Office of Science	26,715	3,521	2,174	8,558	17,300
Total DOE Plant	43,368	11,495	4,979	10,966	20,040
TOTAL DOE PLANT AND CAPITAL EQUIPMENT	68,882	31,499	16,434	43,751	53,970
TOTAL LABORATORY (b)	819,242	784,917	811,276	826,899	858,115

Note: Minor variances may occur due to rounding. Data Source: Berkeley Lab published Fiscal Year End Costs.

(a) Includes costs for Non-Federal Sponsors who are precluded by law from paying an advance under the WN program.

(b) FY2017 costs do not include various adjustments. Examples of these adjustments include bridge funding, inventory, suspense items, and DOE's Federal Administrative Charge. The total of these adjustments for FY2017 is \$1,010K.

Table 2.3

Berkeley Lab Funding and Costs by Funding Source (\$K)

Funding and Cost by Source (\$K)	FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
DOE DIRECT OPERATING				
Administrator for National Nuclear Security Administration	7,490	10,853	11,404	6,939
Advanced Research Projects Agency - Energy	3,781	9,276	2,623	10,433
Assistant Secretary for Electricity Delivery & Energy Reliability	11,435	10,289	8,639	13,085
Assistant Secretary for Energy Efficiency & Renewable Energy	63,347	106,908	80,750	89,505
Assistant Secretary for Environmental Management	32,553	9,072	15,987	25,638
Assistant Secretary for Fossil Energy	8,818	13,972	8,083	14,707
Assistant Secretary for Nuclear Energy	872	3,596	2,096	2,373
Assistant Secretary for International Affairs	5,377	3,826	2,865	6,339
Loan Programs Office	-	-	-	-
Office of Energy & Threat	46	226	167	104
Office of Energy Policy & Systems Analysis	1,253	650	934	968
Office of Environment, Health, Safety and Security	391	40	388	43
Office of Indian Energy Policy & Programs	1	-	1	0
Office of Legacy Management	58	250	58	250
Office of Management	-	-	-	-
Office of Science	248,738	558,594	523,098	284,234
Office of the Chief Information Officer	192	-	110	82
Total DOE Direct Operating	384,351	727,551	657,202	454,700
OTHER DIRECT OPERATING				
Federal Agencies	47,854	49,042	48,131	49,134
Non-Federal Sponsors (a)	31,157	55,063	54,923	31,870
Cooperative Research and Development Agreements	734	2,685	2,446	1,044
DOE Integrated Contractors (b)	-	41,444	41,444	-
Total Other Direct Operating (c)	79,745	148,235	146,943	82,047
TOTAL OPERATING	464,096	875,786	804,145	536,747
<p>(a) Includes funding and deobligations for Non-Federal Sponsors who are precluded by law from paying an advance under the WN02 program.</p> <p>(b) Total funding for Integrated Contractors is assumed to be equal to cost incurred.</p> <p>(c) The sum of FY2017 Beginning Uncosted Obligations, FY2017 Funds, minus, FY2017 Costs does not equal FY2017 Ending Uncosted Obligations due to various adjustments not reflected in the FY2017 Costs column. Examples of these adjustments include bridge funding, inventory, suspense items, and DOE's Federal Administrative Charge. The total of these adjustments for FY2017 is \$1,010K.</p>				

continued...

Table 2.3

Berkeley Lab Funding and Costs by Funding Source (\$K) Continued

Funding and Cost by Source (\$K)	FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
DOE PLANT AND EQUIPMENT				
Basic Equipment/Major Items of Equipment				
Administrator for National Nuclear Security Administration	208	1,428	1,597	40
Assistant Secretary for Energy Efficiency & Renewable Energy	0	-	(0)	0
Office of Science	33,662	39,915	32,334	41,243
Total Capital Equipment	33,871	41,342	33,930	41,283
General Plant Projects				
Office of Science	8	9,000	2,009	6,999
Accelerator Improvement Projects				
Office of Science	979	2,000	731	2,248
Line-Item Construction				
Assistant Secretary for Energy Efficiency & Renewable Energy	-	-	-	-
Office of Science	26,785	20,098	17,300	29,583
Total DOE Plant	27,772	31,098	20,040	38,830
TOTAL DOE PLANT AND CAPITAL EQUIPMENT	61,643	72,440	53,970	80,113
TOTAL LABORATORY	525,738	948,226	858,115	616,860
Note: Minor variances may occur due to rounding.				

Table 2.4

FY2017 Funding and Costs by DOE Programs (\$K)

ADMINISTRATOR FOR NATIONAL NUCLEAR SECURITY ADMINISTRATION		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
CT84	Emergency Response	2	545	455	92
DN20	DNN Research and Development	1,276	6,298	5,886	1,688
DN40	Nonproliferation and Arms Control	7	960	630	337
DPO9	Infrastructure and Operations (formerly RTBF)	1,792	2,400	1,318	2,874
DP15	Advanced Simulation and Computing	2,535	-	2,495	40
DP40	Nuclear Counterterrorism Incident Response	1	-	1	0
MO01	Cyber Security	1,760	650	506	1,903
NN20	Defense Nuclear Nonproliferation Research and Development (DNN R&D)	120	-	114	6
NN40	Nonproliferation and International Security (NIS)	0	-	0	(0)
Total Operating		7,491	10,853	11,405	6,939
CAPITAL EQUIPMENT					
DN20	DNN Research and Development	123	1,428	1,511	40
NN20	Defense Nuclear Nonproliferation Research and Development (DNN R&D)	85	-	85	-
Total Capital Equipment		208	1,428	1,597	40
TOTAL ADMINISTRATOR FOR NATIONAL NUCLEAR SECURITY ADMINISTRATION		7,699	12,281	13,002	6,979
Note: Minor variances may occur due to rounding.					

continued...

Table 2.4 Continued

FY2017 Funding and Costs by DOE Programs (\$K) Continued

OFFICE OF SCIENCE		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
AT10	Burning Plasma Science: Foundations	1,001	(1)	407	593
AT40	Discovery Plasma Science	984	250	954	280
AT50	FES - Science	18	(0)	18	0
FS10	Safeguards and Security - Science	2,607	7,769	7,548	2,828
KA11	Proton Accelerator-Based Physics	-	-	-	-
KA14	Theoretical Physics	0	(0)	-	-
KA15	Advanced Technology R&D (prior to restructure)	-	-	-	-
KA21	Energy Frontier Experimental Physics	4,131	8,857	8,421	4,567
KA22	Intensity Frontier Experimental Physics	1,571	1,973	2,903	641
KA23	Cosmic Frontier Experimental Physics	4,613	10,019	9,845	4,786
KA24	Theoretical and Computational Physics	2,831	5,185	4,806	3,209
KA25	Advanced Technology R&D	5,242	19,095	17,080	7,256
KA26	Accelerator Stewardship	73	1,294	449	918
KB01	Medium Energy Physics	288	544	245	588
KB02	Heavy-Ion Physics	1,314	5,701	5,079	1,936
KB03	Nuclear Theory	1,403	2,958	2,988	1,374
KB04	Low Energy Physics	2,900	10,565	10,516	2,950
KC02	Materials Sciences and Engineering	10,423	29,076	24,739	14,760
KC03	Chemical Sciences, Geosciences, and Biosciences	19,646	37,643	34,291	22,999
KC04	Scientific User Facilities	28,864	93,061	95,552	26,373
KJ04	Mathematical, Computational, and Computer Sciences Research	43,160	26,835	25,926	44,069
KJ05	High Performance Computing and Network Facilities	63,663	139,685	123,512	79,836
KL10	Internships and Visiting Faculty Activities at DOE Labs	748	1,298	1,459	588
KP12	Climate Change Research	28	-	27	1
KP15	Biological Research	40	(0)	2	38
KP16	Biological Systems Science	29,394	124,131	117,803	35,722
KP17	Climate and Environmental Sciences	23,795	32,307	28,474	27,628
ST50	Isotope Research	0	350	55	296
TOTAL OPERATING		248,738	558,594	523,098	284,234

continued...

Table 2.4 Continued

FY2017 Funding and Costs by DOE Programs (\$K) Continued

OFFICE OF SCIENCE		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
CAPITAL EQUIPMENT					
AT40	Discovery Plasma Science	923	-	910	14
AT50	FES - Science	0	(0)	-	-
FS10	Safeguards and Security - Science	600	(600)	-	-
KA11	Proton Accelerator-Based Physics	-	-	-	-
KA15	Advanced Technology R&D (prior to restructure)	-	-	-	-
KA22	Intensity Frontier Experimental Physics	692	-	115	577
KA23	Cosmic Frontier Experimental Physics	8,306	24,500	20,275	12,531
KA25	Advanced Technology R&D	1,089	2,053	2,308	834
KA26	Accelerator Stewardship	200	559	583	175
KB02	Heavy-Ion Physics	602	50	464	188
KB04	Low Energy Physics	2,558	2,200	1,146	3,612
KC02	Materials Sciences and Engineering	737	647	169	1,215
KC03	Chemical Sciences, Geosciences, and Biosciences	8	536	-	544
KC04	Scientific User Facilities	10,443	8,975	5,351	14,066
KJ05	High Performance Computing and Network Facilities	4,627	-	-	4,627
KP16	Biological Systems Science	2,878	995	1,013	2,861
Total Capital Equipment		33,662	39,915	32,334	41,243
GENERAL PLANT PROJECTS					
FS10	Safeguards and Security - Science	8	-	8	0
KG07	Facilities and Infrastructure	-	9,000	2,001	6,999
Total General Plant Projects		8	9,000	2,009	6,999
ACCELERATOR IMPROVEMENT PROJECTS					
KC04	Scientific User Facilities	979	2,000	731	2,248
Total Accelerator Improvement Projects		979	2,000	731	2,248
LINE-ITEM CONSTRUCTION					
39KA	High Energy Physics	1,319	540	1,842	17
39KG	Science Laboratories Infrastructure	25,466	19,558	15,457	29,566
Total Line-Item Construction		26,785	20,098	17,300	29,583
TOTAL DOE PLANT		27,772	31,098	20,040	38,830
TOTAL OFFICE OF SCIENCE		310,172	629,606	575,471	364,307

Note: Minor variances may occur due to rounding.

continued...

Table 2.4 Continued

FY2017 Funding and Costs by DOE Programs (\$K) Continued

ASSISTANT SECRETARY FOR ENERGY EFFICIENCY AND RENEWABLE ENERGY		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
BM01	Biomass/Biofuels Energy Systems	4,669	10,366	7,416	7,620
BR01	EE Departmental Admin, Rec Act	-	-	-	-
BT01	Residential Buildings Integration	793	2,545	2,099	1,239
BT02	Commercial Buildings Integration	5,000	6,634	6,226	5,408
BT03	Emerging Technologies	7,828	10,621	7,960	10,488
BT04	Equipment and Buildings Standards	8,636	18,272	11,959	14,950
BT08	EE Building Systems Design Energy Innovation Hubs	0	-	0	0
EB21	Solar Energy	17	-	-	17
EB25	Wind Energy Systems	-	-	-	-
EB36	Facilities and Infrastructure	-	-	-	-
EB40	Geothermal Technologies	157	-	87	70
EB42	Hydrogen Research R&D	7	(0)	6	1
EB51	Energy Efficiency and Renewable Energy Program Direction	-	-	-	-
EB57	Energy Efficiency and Renewable Energy (EERE) Program Support	26	(0)	2	24
ED19	Industries Of The Future (Crosscutting)	19	-	17	2
ED20	Industrial Technical Assistance	3,588	7,202	6,886	3,904
ED27	Next Generation Manufacturing R&D Projects	8,342	5,737	5,189	8,889
ED28	Advanced Manufacturing R&D Facilities	0	-	-	0
EL17	Federal Energy Management Program	1,712	4,081	3,399	2,394
GT01	Enhanced Geothermal Systems	2,653	4,789	2,590	4,852
GT02	Low Temperature and Co-produced Resource	815	625	788	651
GT03	Hydrothermal	1,698	1,161	1,201	1,658
GT04	Systems Analysis	384	15	372	27
HT01	Fuel Cell Systems R&D	659	1,750	1,626	784
HT02	Hydrogen Fuel R&D	1,901	2,758	2,897	1,762
HT05	Safety, Codes & Standards	7	-	7	0
HT07	Manufacturing R&D	167	293	181	279
HT08	Technology Validation	529	255	545	238
HT11	Technology Acceleration	-	585	27	558
PG03	Strategic Priorities and Impact Analysis	1,022	928	1,016	933
PG04	Technology-to-Market	929	50	26	953
PG05	International	242	440	416	266
SL01	Concentrating Solar Power	38	(0)	24	14
SL02	Photovoltaic R&D	51	1,000	37	1,014
SL03	Systems Integration (Balance of Systems and Power Electronics)	1,734	6,469	1,733	6,470
SL04	Balance of Systems Soft Cost Reduction	2,309	2,181	1,562	2,928

continued...

Table 2.4 Continued

FY2017 Funding and Costs by DOE Programs (\$K) Continued

ASSISTANT SECRETARY FOR ENERGY EFFICIENCY AND RENEWABLE ENERGY		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
SL05	Innovations in Manufacturing Competitiveness	39	49	47	42
VT02	Outreach, Deployment & Analysis	760	621	768	613
VT04	Advanced Combustion and Engine R&D	0	-	-	0
VT05	Materials Technology	123	250	300	72
VT06	Fuels Technology	17	200	69	148
VT11	Hybrid Electric Systems	0	(0)	-	-
VT12	Batteries and Electric Drive Technology	4,371	10,585	9,810	5,146
VT13	Vehicle & Systems Simulation and Testing	657	3,563	1,554	2,665
WC01	Water Power Program	23	(11)	12	1
WI03	State Energy Program (Grants)	725	562	467	820
WI04	Other State Energy Activities	0	-	0	0
WI06	Intergovernmental Activities	62	(0)	62	0
WI07	Weatherization Assistance Program	4	150	87	68
WI12	Weatherization Innovation	17	-	17	0
WW02	Technology Viability	23	31	22	32
WW03	Technology Application	27	(0)	27	0
WW08	Mitigate Market Barriers	201	618	285	534
WW09	Modeling & Analysis	363	1,534	929	968
Total Operating		63,347	106,908	80,750	89,505
CAPITAL EQUIPMENT					
BT04	Equipment and Buildings Standards	0	-	-	0
ED27	Next Generation Manufacturing R&D Projects	0	-	(0)	0
Total Capital Equipment		0	0	(0)	0
LINE-ITEM CONSTRUCTION					
39EB	Facilities and Infrastructure	-	-	-	-
Total Line-Item Construction		0	0	0	0
TOTAL DOE PLANT		0	0	0	0
TOTAL ASSISTANT SECRETARY FOR ENERGY EFFICIENCY AND RENEWABLE ENERGY		63,347	106,908	80,750	89,505

Note: Minor variances may occur due to rounding.

continued...

Table 2.4 Continued

FY2017 Funding and Costs by DOE Programs (\$K) Continued

ASSISTANT SECRETARY FOR ELECTRICITY DELIVERY AND ENERGY RELIABILITY		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
TD50	Research and Development	14	(0)	14	0
TD54	Operations & Analysis	0	-	-	0
TE11	Clean Energy Transmission & Reliability	4,852	3,180	3,617	4,414
TE12	Smart Grid Research and Development	2,099	1,845	1,996	1,948
TE13	Cyber Security for Energy Delivery Systems	495	428	199	724
TE14	Energy Storage	45	1,269	106	1,208
TE15	Transformer Resilience & Advanced Components	11	277	14	273
TF00	National Electricity Delivery	3,919	3,216	2,693	4,442
TG01	Infrastructure Security and Energy Restoration	0	75	-	75
Total Operating		11,435	10,289	8,639	13,085
TOTAL ASSISTANT SECRETARY FOR ELECTRICITY DELIVERY AND ENERGY RELIABILITY		11,435	10,289	8,639	13,085
Note: Minor variances may occur due to rounding.					
ASSISTANT SECRETARY FOR FOSSIL ENERGY		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
AA15	Advanced Research	4	-	4	0
AA20	Central Systems	14	-	13	1
AA25	Fuel Cells	3	(3)	-	-
AA30	Sequestration	217	-	49	169
AA60	Advanced Energy Systems	0	150	4	146
AA65	Carbon Capture	28	1,500	65	1,463
AA70	Carbon Storage	3,577	8,833	4,292	8,118
AA90	Cross Cutting Research	3,380	2,091	2,302	3,169
AB05	Natural Gas Technologies	1,348	1,400	1,282	1,466
AC10	Oil Technology	76	-	8	68
AD20	Contractual Services And Supplies	45	(0)	31	14
AY05	Clean Coal Power Initiative	0	-	0	0
BD00	Unconventional Fossil Energy Technologies	125	-	33	92
CE03	Center for Zero Emissions Technology - Montana State	0	-	-	0
CE47	Innovations for Low-Cost Gasification Systems	1	-	1	-
CE54	Design and Test of an Advanced SOFC Generator in PA	0	-	0	0
Total Operating		8,818	13,972	8,083	14,707
TOTAL ASSISTANT SECRETARY FOR FOSSIL ENERGY		8,818	13,972	8,083	14,707
Note: Minor variances may occur due to rounding.					

continued...

Table 2.4 Continued

FY2017 Funding and Costs by DOE Programs (\$K) Continued

ASSISTANT SECRETARY FOR ENVIRONMENTAL MANAGEMENT		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
EY40	Defense Site Acceleration Completion - Technology Development and Deployment	85	172	184	73
EY80	Defense Environmental Cleanup - Program Support	1	-	1	0
EZ50	Non-Defense Environmental Cleanup - Small Sites	32,466	8,900	15,802	25,565
Total Operating		32,553	9,072	15,987	25,638
TOTAL ASSISTANT SECRETARY FOR ENVIRONMENTAL MANAGEMENT		32,553	9,072	15,987	25,638
Note: Minor variances may occur due to rounding.					
OFFICE OF ENVIRONMENT, HEALTH, SAFETY & SECURITY		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
HQ10	Employee Compensation	10	40	40	10
HU10	Corporate Safety Program	381	-	348	33
Total Operating		391	40	388	43
TOTAL OFFICE OF HEALTH SAFETY AND SECURITY		391	40	388	43
Note: Minor variances may occur due to rounding.					
ASSISTANT SECRETARY FOR NUCLEAR ENERGY		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
AF58	Fuel Cycle Research and Development (FCR&D)	457	3,547	1,937	2,067
DF01	First Repository	18	-	3	15
NT05	Nuclear Energy Advanced Modeling and Simulation	397	50	156	291
RC04	Advanced Reactor Concepts (ARC)	0	(0)	-	-
Total Operating		872	3,596	2,096	2,373
TOTAL ASSISTANT SECRETARY FOR NUCLEAR ENERGY		872	3,596	2,096	2,373
Note: Minor variances may occur due to rounding.					

continued...

Table 2.4 Continued

FY2017 Funding and Costs by DOE Programs (\$K) Continued

OFFICE OF INDIAN ENERGY POLICY & PROGRAMS		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
IP10	Salaries & Benefits	1	-	0	0
IP20	Support Services	1	-	1	0
Total Operating		1	0	1	0
TOTAL OFFICE OF INDIAN ENERGY POLICY & PROGRAMS		1	0	1	0
Note: Minor variances may occur due to rounding.					
OFFICE OF LEGACY MANAGEMENT		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
LM01	Legacy Management Activities - Defense	58	250	58	250
Total Operating		58	250	58	250
TOTAL OFFICE OF LEGACY MANAGEMENT		58	250	58	250
Note: Minor variances may occur due to rounding.					
OFFICE OF ENERGY AND THREAT		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
GD50	Cyber	2	-	-	2
GD60	Energy and Threat-Program	44	226	167	103
Total Operating		46	226	167	104
TOTAL OFFICE OF ENERGY AND THREAT		46	226	167	104
Note: Minor variances may occur due to rounding.					

continued...

Table 2.4 Continued

FY2017 Funding and Costs by DOE Programs (\$K) Continued

ASSISTANT SECRETARY FOR INTERNATIONAL AFFAIRS		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
PE04	Office Of Environmental Analysis	16	(5)	11	0
PE06	Climate Change Technology Program-International	3	(0)	2	0
WA22	Office of International Affairs - Program Direction	5,359	3,832	2,852	6,338
Total Operating		5,377	3,826	2,865	6,339
TOTAL ASSISTANT SECRETARY FOR INTERNATIONAL AFFAIRS		5,377	3,826	2,865	6,339
Note: Minor variances may occur due to rounding.					
ADVANCED RESEARCH PROJECTS AGENCY - ENERGY		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
CJ01	ARPA-E Projects	3,773	9,276	2,623	10,426
CJ02	Program Direction	7	-	-	7
Total Operating		3,781	9,276	2,623	10,433
TOTAL ADVANCED RESEARCH PROJECTS AGENCY - ENERGY		3,781	9,276	2,623	10,433
Note: Minor variances may occur due to rounding.					
OFFICE OF ENERGY POLICY & SYSTEMS ANALYSIS		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
EP01	EPSA Program Direction	1,252	650	934	968
EP02	Climate Change Technology	0	(0)	-	-
PE01	Policy, Planning And Analysis	0	-	0	0
Total Operating		1,253	650	934	968
TOTAL OFFICE OF ENERGY POLICY & SYSTEMS ANALYSIS		1,253	650	934	968
Note: Minor variances may occur due to rounding.					

continued...

Table 2.4 Continued

FY2017 Funding and Costs by DOE Programs (\$K) Continued

OFFICE OF THE CHIEF INFORMATION OFFICER		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
OPERATING					
CS70	Integrated Joint Cybersecurity Coordination Center (iJC3)	192	-	110	82
Total Operating		192	0	110	82
TOTAL OFFICE OF THE CHIEF INFORMATION OFFICER		192	-	110	82
Note: Minor variances may occur due to rounding.					
ALL DOE PROGRAMS (\$K)		FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
TOTAL OPERATING		384,352	727,551	657,204	454,700
TOTAL CAPITAL EQUIPMENT		33,871	41,342	33,930	41,283
TOTAL GENERAL PLANT PROJECTS		8	9,000	2,009	6,999
TOTAL ACCELERATOR IMPROVEMENT PROJECTS		979	2,000	731	2,248
TOTAL LINE ITEM CONSTRUCTION		26,785	20,098	17,300	29,583
TOTAL FUNDING AND COSTS		445,995	799,991	711,174	534,813
Note: Minor variances may occur due to rounding.					

Table 2.5

FY2017 Funding and Costs by Other Direct Operating Source (\$K)

Funding Source	FY2017 Beginning Uncosted Obligations	FY2017 Funds	FY2017 Costs	FY2017 Ending Uncosted Obligations
REIMBURSABLE WORK				
Federal Agencies				
Department Of Agriculture	58	-	10	48
Department Of Defense	16,782	8,762	14,759	10,898
Department of Homeland Security - Borders and Transportation	391	(0)	310	81
Department of Homeland Security - Domestic Nuclear Detection Office	1,263	4,898	2,958	3,203
Department of Homeland Security - Science and Technology	22	(0)	19	1
Department Of Housing And Urban Development	191	-	195	2
Department Of State - Other	1,238	2,507	1,262	2,160
Department Of The Interior	77	2	74	8
Environmental Protection Agency	709	722	788	666
National Aeronautics And Space Administration	2,768	3,612	3,224	3,250
National Institutes of Health	22,617	26,125	22,662	26,151
National Science Foundation	83	(0)	85	1
Nuclear Regulatory Commission	314	(76)	196	48
Other Federal Agencies	1,328	2,504	1,590	2,618
Other Federal Agencies - Energy-Related Activities	12	(12)	-	-
Total Federal Agencies	47,854	49,042	48,131	49,134
Non-Federal Agencies				
Foreign Governments (a)	656	1,568	1,314	949
Domestic and Foreign Industry	9,013	22,726	20,224	11,805
State and Local Governments & NPO's (a)	15,082	21,575	21,855	15,047
Universities and Institutes (a)	6,406	9,195	11,529	4,068
Total Non-Federal Agencies	31,157	55,063	54,923	31,870
Cooperative Research and Development Agreements				
CRADA - Other	617	2,182	1,850	1,010
CRADA - Small Business	117	504	596	34
Total Cooperative Research and Development Agreements	734	2,685	2,446	1,044
TOTAL REIMBURSABLE WORK	79,745	106,791	105,499	82,047
DOE INTEGRATED CONTRACTORS				
Work Performed for Other DOE Locations (b)	-	41,444	41,444	-
Total DOE Integrated Contractors	-	41,444	41,444	-
TOTAL OTHER DIRECT OPERATING (c)	79,745	148,235	146,943	82,047
<p>Note: Minor variances may occur due to rounding.</p> <p>(a) Includes funding obligations and deobligations for Non-Federal Sponsors who are precluded by law from paying an advance under the WN02 program.</p> <p>(b) Total funding for Integrated Contractors is assumed to be equal to cost incurred.</p> <p>(c) The sum of FY2017 Beginning Uncosted Obligations, FY2017 Funds, minus, FY2017 Costs does not equal FY2017 Ending Uncosted Obligations due to various adjustments not reflected in the FY2017 Costs column. Examples of these adjustments include bridge funding, inventory, suspense items, and DOE's Federal Administrative Charge. The total of these adjustments for FY2017 is \$1,010K.</p>				

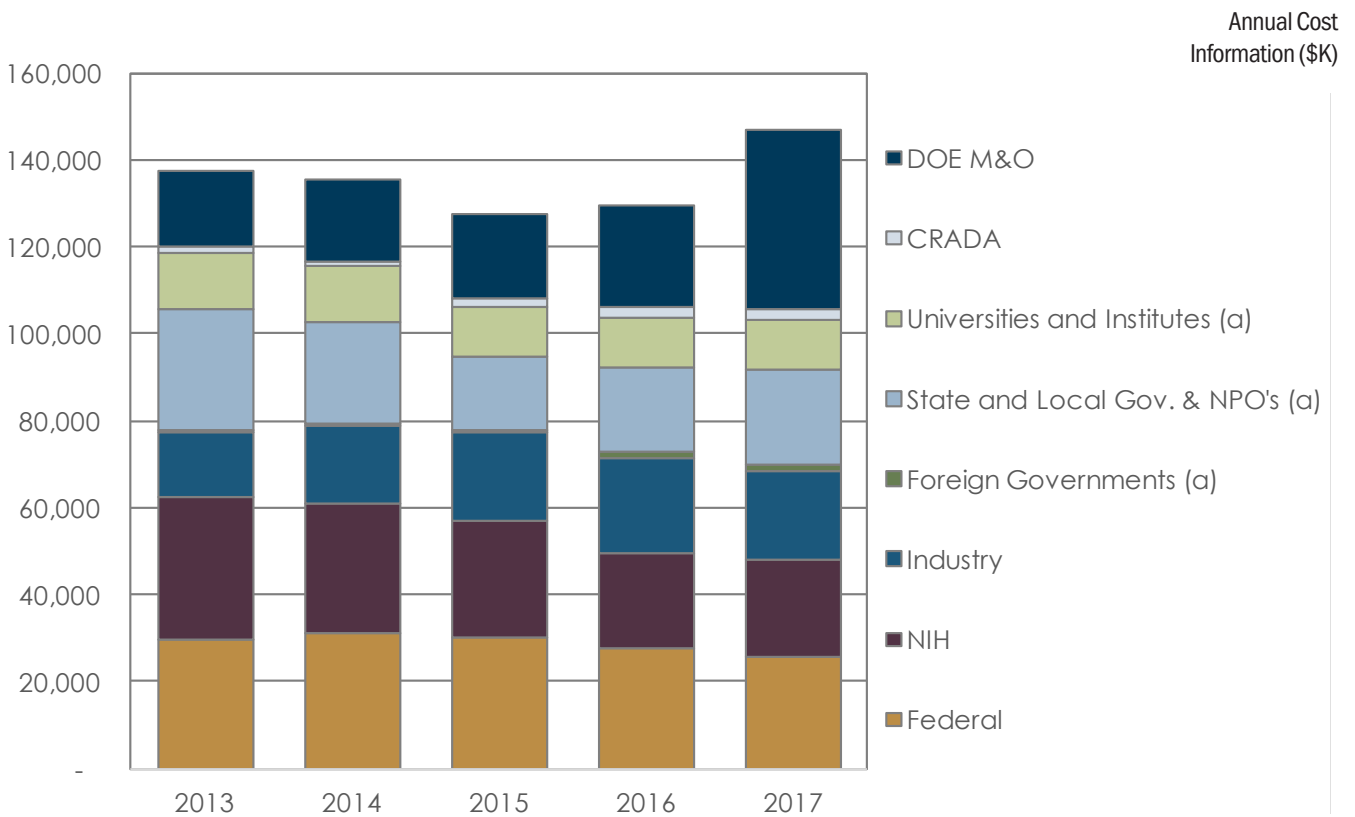
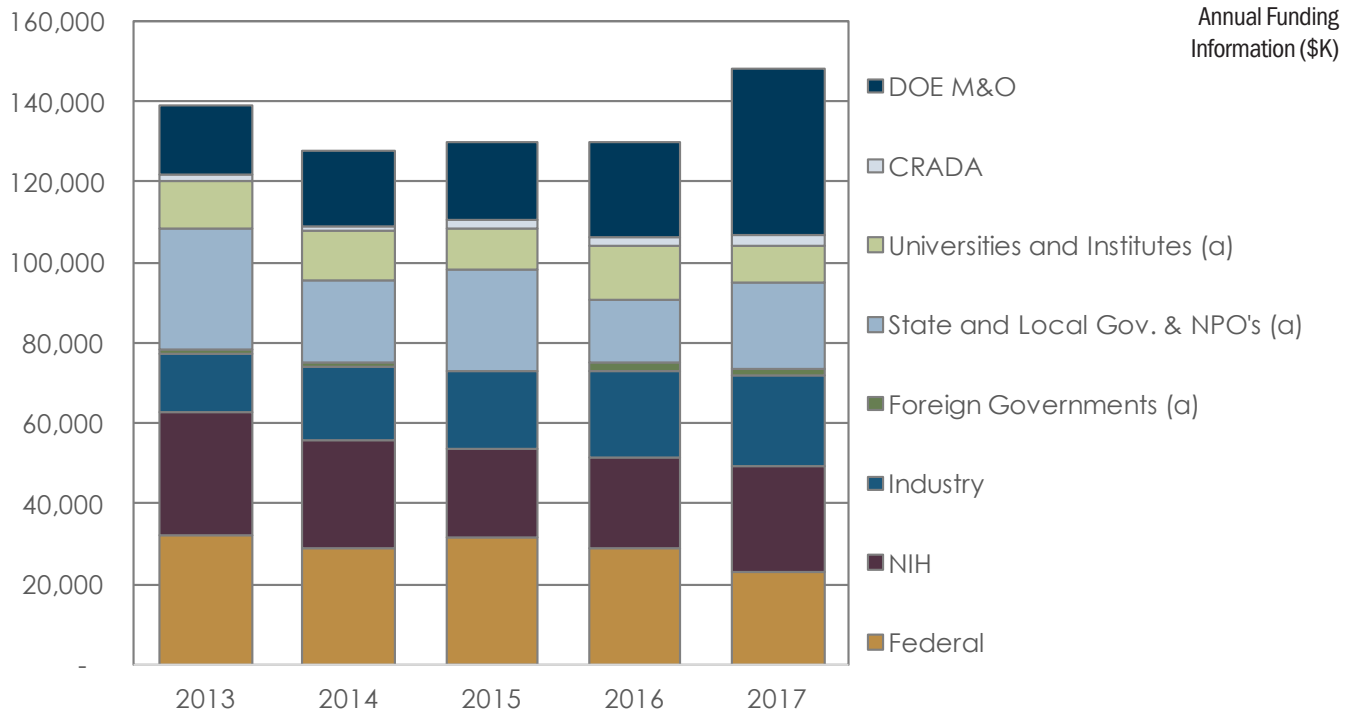
Table 2.6

Total Funding Amounts by Area and Division for Each Fiscal Year (\$K)

Areas & Divisions	FY2013	FY2014	FY2015	FY2016	FY2017
BIOSCIENCES	173,061	174,359	173,539	166,741	179,747
Biological Systems & Engineering	-	-	-	40,785	45,481
Environmental Genomics & System Biology	-	-	-	17,644	22,596
Joint Genome Institute	-	-	-	70,884	70,715
Molecular Biophysics & Integrated Bioimaging	-	-	-	37,429	40,956
Genomics	73,130	77,853	79,476	-	-
Life Sciences	37,760	32,395	29,174	-	-
Physical Biosciences	62,171	64,112	64,889	-	-
COMPUTING SCIENCES	144,178	146,947	165,127	174,134	189,990
Computational Research	-	-	42,698	33,671	43,737
National Energy Research Scientific Computing Center	-	-	81,773	96,973	93,814
Scientific Networking	-	-	40,656	43,489	52,439
Computing Sciences	144,178	146,947	-	-	-
DIRECTORATE & OPERATIONS	26,842	23,033	17,495	45,477	46,763
Chief Financial Officer	1,030	(2,146)	(2,612)	(802)	(21)
Environment, Health, Safety & Security	(801)	7	-	-	-
Facilities	19,348	17,588	12,153	36,520	37,458
Information Technology	2,130	2,605	2,384	4,139	4,029
Laboratory Directorate	(192)	20	173	592	165
Operations	1,586	1,376	106	123	162
Protective Services	3,741	3,584	3,589	3,603	3,673
Public Affairs	-	-	1,702	1,302	1,298
EARTH & ENVIRONMENTAL SCIENCES	53,296	66,807	65,148	64,679	79,953
Climate & Ecosystem Sciences	-	-	-	38,843	42,308
Energy Geosciences	-	-	-	25,836	37,646
Energy Sciences	53,296	66,807	65,148	-	-
ENERGY SCIENCES	168,206	156,847	155,628	173,469	176,437
Advanced Light Source	63,451	63,188	66,238	74,439	74,279
Chemical Sciences	26,108	21,350	21,795	27,988	29,204
Materials Sciences	78,647	72,309	67,596	71,043	37,195
Molecular Foundry	-	-	-	-	35,759
ENERGY TECHNOLOGIES	115,737	98,817	98,048	125,708	140,598
Building Technologies & Urban Systems	-	-	-	40,138	44,214
Cyclotron Road	-	-	-	2,345	3,982
Energy Analysis & Environmental Impacts	-	-	-	46,722	56,664
Energy Storage & Distributed Resources	-	-	-	36,502	35,738
Environmental Energy Technologies	115,737	98,817	98,048	-	-
PHYSICAL SCIENCES	112,061	117,514	122,725	147,270	134,738
Accelerator Technology & Applied Physics	24,910	28,540	36,986	37,461	43,386
Engineering	5,085	4,754	3,595	2,132	1,519
Nuclear Science	34,281	33,543	31,916	35,304	32,882
Physics	47,785	50,676	50,229	72,373	56,951
GRAND TOTAL	793,380	784,324	797,710	897,479	948,226

Figure 2.1

FY2017 Funding and Cost Trends by Other Direct Operating Source (\$K)



Note: Minor variances may occur due to rounding.

(a) Includes funding obligations and deobligations for Non-Federal sponsors precluded by law from paying an advance under the WN02 program.

3. INDIRECT BUDGETS

Figure 3.1

Indirect Budgets – FY2017 Costs (\$M)

Indirect Budgets (a)	FY2017 Costs (\$M)
G&A (Includes Site Support)	186.0
ALD & Organizational Burden	59.7
Service Centers (b)	42.3
LDRD	25.4
Procurement	14.0
IGPP	13.6
Travel	1.4
Other (c)	0.2
Total	342.6

(a) Summation of indirect budget provided only to show magnitude of dollars being managed and does not equate to total indirect costs since there are overlaps between indirect budgets. For example, some organization burden costs are included in G&A and Recharges. In FY2017, LDRD cost includes \$7.9M G&A assessed on LDRD projects.
 (b) Service Centers includes recharge cost centers that default to B&R YN01 (project type OHRCH) only.
 (c) Includes Office of Homeland Security Charge.

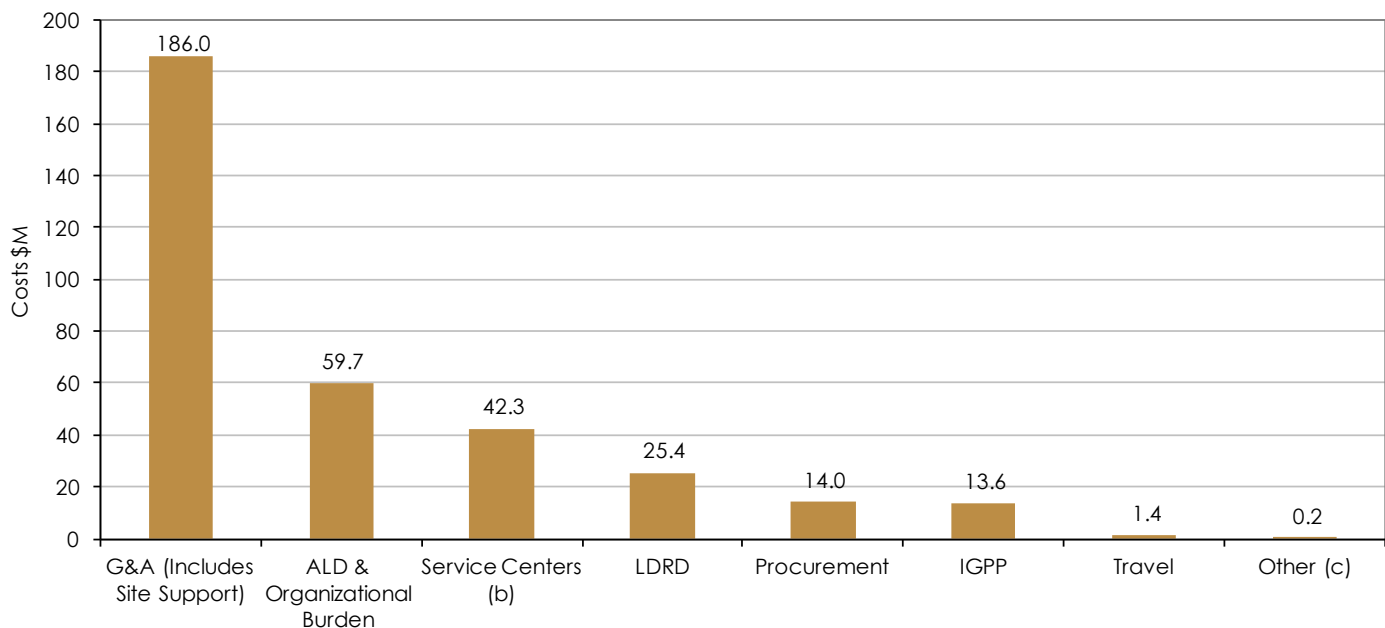
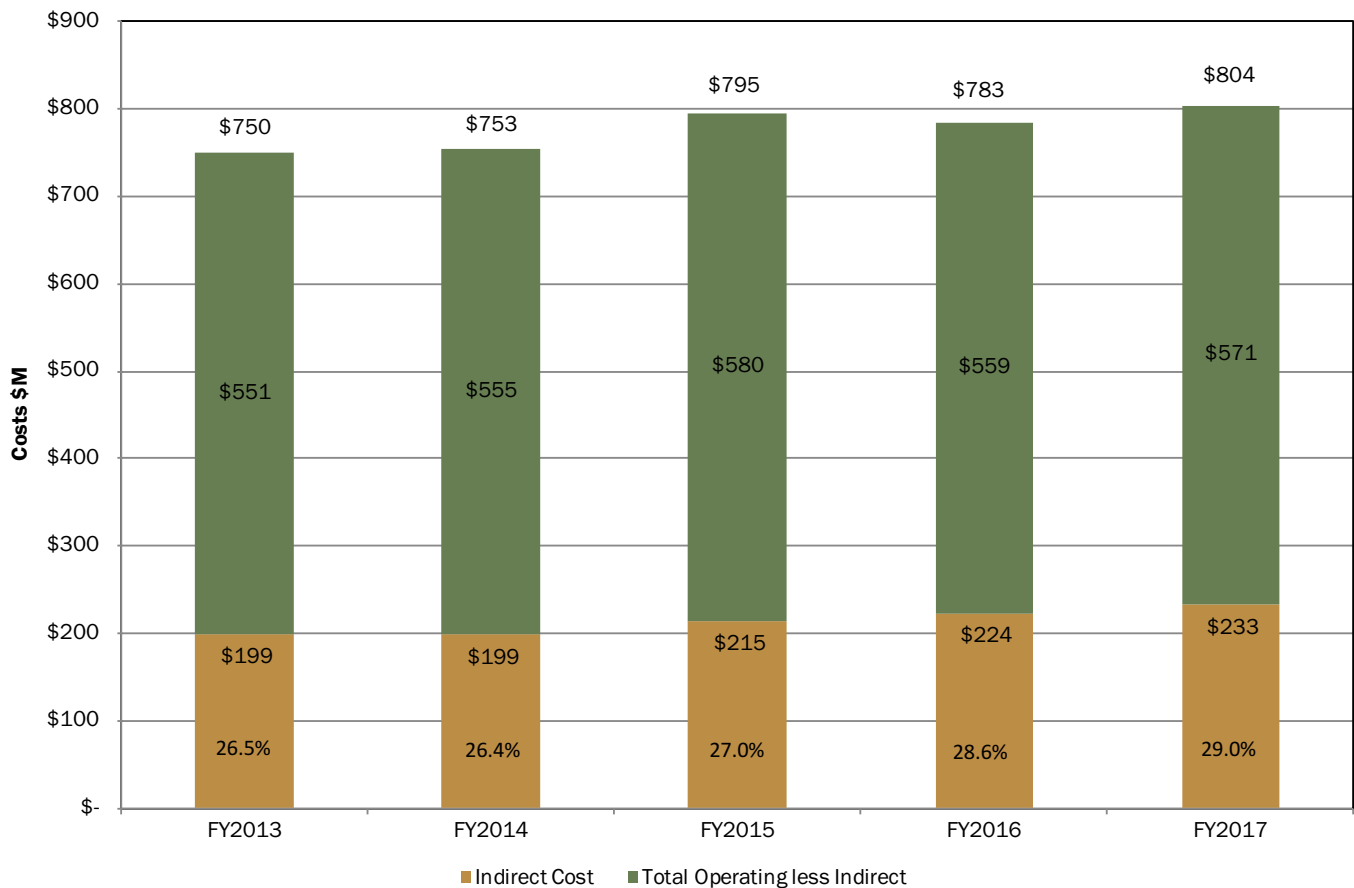


Figure 3.2

Institutional Overhead Costs as a Percent of Operating Costs, FY2013-FY2017



Note: Chart represents the institutional cost structure for each fiscal year with adjustments for indirect double count of G&A on LDRD projects. Institutional overhead costs include G&A, Site Support, LDRD, Travel, Procurement, and IGPP. Percent is the percentage of indirect cost to total operating cost.

Total Operating Costs are used as the denominator in the chart above because this is more representative of ongoing scientific program costs. Including Construction and Equipment costs, which are generally procurement intensive and one-time in nature, would create significant anomalies in overhead comparisons for prior years. Thus, Construction and Capital Equipment costs are excluded from this chart. This differs from Table 1.1.

Table 3.1

Institutional Costs by Division, FY2017 (\$K)

Division	G&A (a)	LDRD (b)	Procurement	Travel	IGPP	Total
Lab Directorate	20,111					20,111
LDRD		25,401				25,401
Associate Lab Director for Operations						
Chief Operating Officer	2,288					2,288
Project Management Office	905					905
Office of Institutional Assurance and Integrity	2,015					2,015
Public Affairs	2,877					2,877
Human Resources	9,651					9,651
Environment, Health & Safety	21,733					21,733
Facilities	57,163		1,934		13,560	72,657
Noncap	8,054					8,054
OCFO	8,646		12,060	1,398		22,104
IT Division & BSC	32,466					32,466
Protective Services	9,381					9,381
Engineering	2,852					2,852
Earth Sciences	20					20
General Lab	7,869					7,869
Total	186,033	25,401	13,993	1,398	13,560	240,385
Note: Minor variances may occur due to rounding. (a) Includes Site Support & Strategic Planning Support Activities (SPSA). (b) LDRD costs include \$7.9M of G&A assessment.						

Table 3.2

Institutional FTEs Charged by Division, FY2017

Division	G&A (a)	LDRD (b)	Procurement	Travel	IGPP	Total
Lab Directorate	70.1					70.1
LDRD		106.2				106.2
Chief Operating Officer	7.9					7.9
Project Management Office	2.6					2.6
Office of Institutional Assurance and Integrity	10.1					10.1
Public Affairs	15.3					15.3
Human Resources	53.0					53.0
Environment, Health & Safety	93.3					93.3
Facilities	166.3		12.1		8.2	186.6
Engineering	6.9					6.9
Earth Sciences	0.1					0.1
OCFO	59.1		71.9	7.9		138.9
IT Division & BSC	91.8					91.8
Protective Services	15.0					15.0
General Lab	-					-
Total	591.6	106.2	84.0	7.9	8.2	798.0
Note: Minor variances may occur due to rounding.						
(a) Includes Site Support & Strategic Planning Support Activities (SPSA)						
(b) LDRD projects conducted by multiple divisions as reflected in Table 1.3						

Figure 3.3

Payroll Burden Summary (\$M)

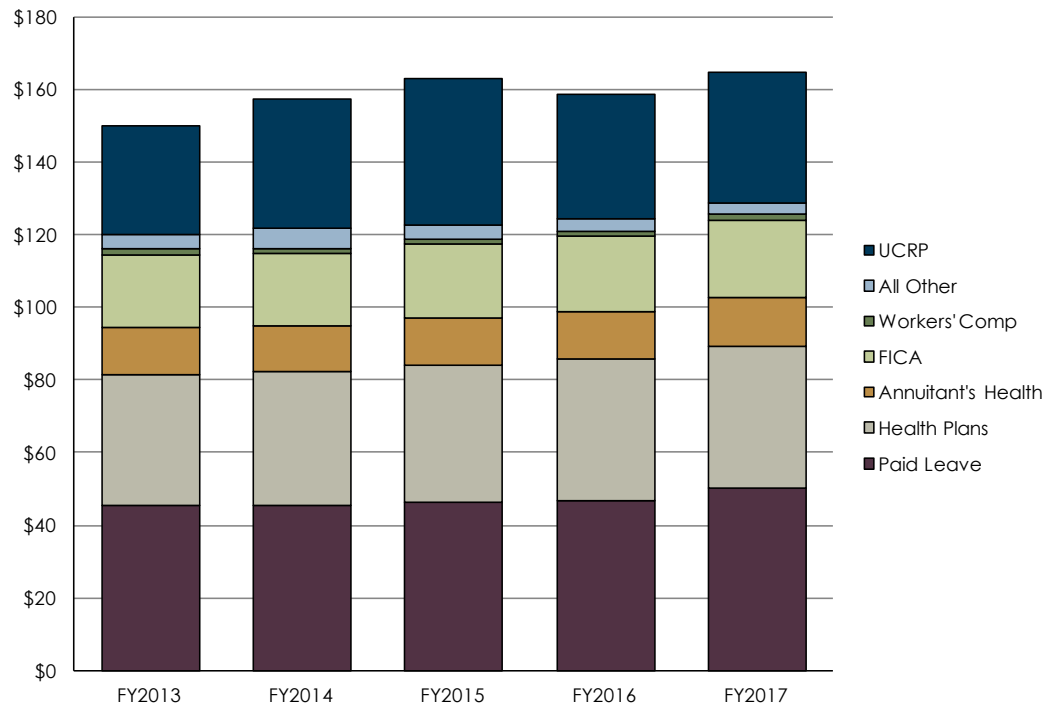
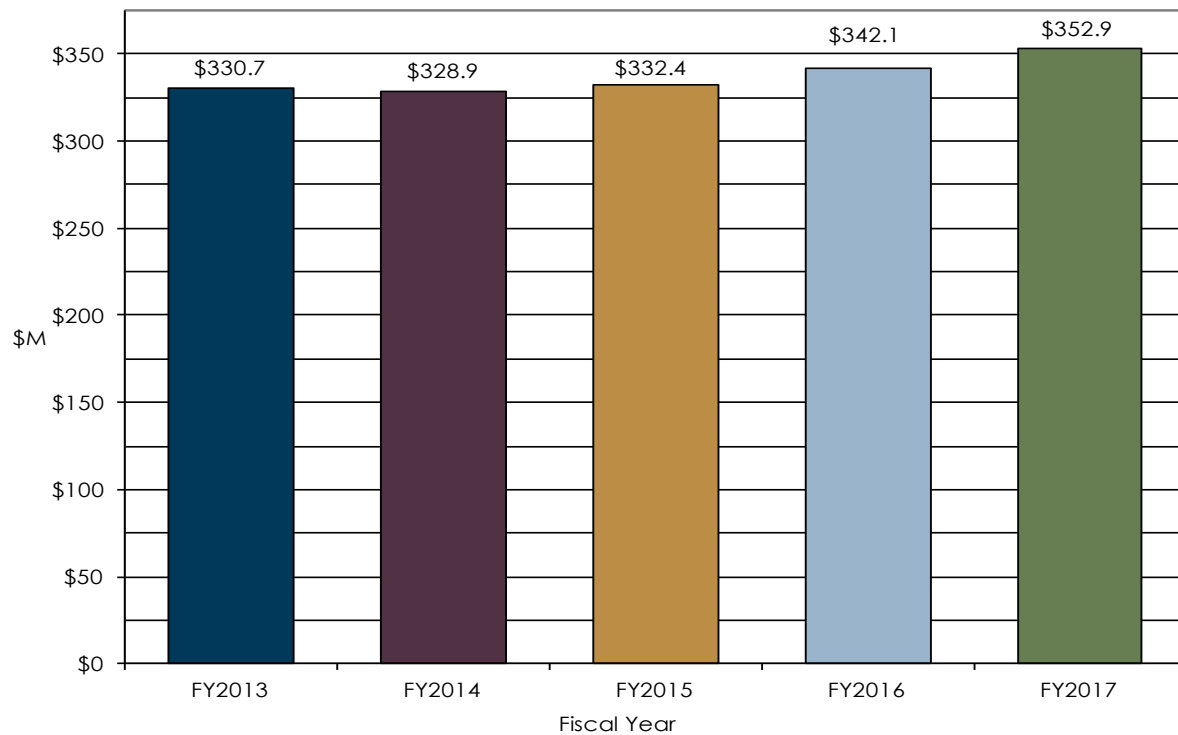


Figure 3.4

Gross Payroll Summary (\$M)



Note: Gross payroll excludes payroll transactions such as Severance, Worker's Compensation, etc. Total annual payroll for FY2016 is \$372M and for FY2017 is \$358M.

Table 3.3

Area and Organizational Burden Costs and FTEs

Burden includes costs for the management and supervision of Area/Division activities and is distributed over labor costs including campus and contract labor.

Area/Organization Cost Pools	FY2017	
	Cost \$K	Avg FTE
Biosciences (Area Burden Only)	12,398	73.6
Computing Sciences	6,887	36.4
Computational Research	2,354	9.7
Computing Sciences Area	3,329	17.3
National Energy Research Scientific Computing Center	895	6.8
Scientific Networking Division	309	2.6
Earth & Environmental Sciences (Area Burden Only)	4,450	21.6
Energy Sciences	8,875	45.0
Advanced Light Source	2,431	10.4
Chemical Sciences	2,084	12.0
Energy Sciences Area	531	2.5
Materials Sciences	2,230	11.8
Molecular Foundry	1,599	8.3
Energy Technologies Area (Area Burden Only)	8,233	39.4
Physical Sciences	10,771	51.0
Accelerator Technology & Applied Physics	1,709	9.2
Engineering	5,062	21.4
Nuclear Sciences	1,747	9.8
Physical Sciences Area	448	1.3
Physics	1,805	9.4
Directorate & Operations	8,065	35.0
Facilities	5,082	22.7
Information Technology	2,983	12.3
Total	59,678	302.0
Note: Minor Variances may occur due to rounding.		

Table 3.4

Service Center Costs and FTEs by Division

Certain Laboratory services are provided by recharges that recover operational costs through various cost-allocation mechanisms; e.g., by assigning a dollar value to the work performed (a unit charge based on an hourly rate) or the products produced (unit charge per item).

Division (a)	FY2017	
	Cost \$K	Avg FTE
OCFO - Property Storage Recharge	92	0.2
Accelerator Technology & Applied Physics	50	0.1
Computing Sciences	3,387	-
Energy Technologies Area	3,064	20.4
Engineering	1,260	6.1
Earth Sciences	83	0.2
Facilities	9,337	1.9
Genomics (JGI)	4,429	1.0
Information Technology	6,537	18.8
Bioscience Area Office	684	4.3
Materials Sciences	200	1.0
Biological Systems & Energy	6,471	6.8
Molecular Biophysics & Integrated Bioimaging	1,333	6.2
Operations Area (b)	4,507	6.1
Lab Directorate	847	2.2
Total	42,280	75.4
Note: Minor Variances may occur due to rounding. (a) Service Centers includes recharge cost centers that default to B&R YN01 (project type OHRCH) only and GSRA pass through costs. (b) Includes: GSRA pass through costs.		

Table 3.5

Distributed Recharges by Resource Category Trends, FY2013-FY2017 (\$K)

Distributed Recharge (a, b)	FY2013	FY2014	FY2015	FY2016	FY2017
Vehicle	759	859	864	875	883
MSD Facility	259	250	272	272	259
Animal Care	665	640	659	657	605
Creative Services	1,507	1,233	919	955	1,040
FAM Facility Recharge	75	104	78	57	41
ESD Sample Analysis Recharge	131	49	69	111	82
Warehouse Storage Recharge	128	100	96	90	98
88-Inch Accelerator Operations	720	511	1,026	1,185	1,065
JBEI Non-Material Recharge	946	931	1,335	869	775
JBEI Material Recharge	4,845	5,162	5,270	5,280	5,477
BCSB	-	1,325	1,568	1,445	1,258
Telephone Services	5,318	5,406	5,200	5,592	5,108
ETA Recharge	2,149	2,524	2,802	2,687	2,787
Computer/Net Recharges	1,913	1,683	1,584	1,463	1,473
Flexlab Recharge	-	40	60	204	303
Engineering Shop	884	729	656	606	622
CAD	794	728	731	739	669
ALS Proprietary Recharge	617	576	809	868	774
JGI Production Sequencing	-	61	63	38	84
NERSC Sponsored Storage Recharge	310	294	294	569	220
Scientific Networking	-	-	2,683	3,250	3,492
CRT HPC Recharge	-	-	1,327	3,612	3,387
JGI Occupancy Labor Recharge	1,152	1,188	980	132	151
JGI Occupancy Material Recharge	-	3,821	4,617	4,231	4,275
Electricity	10,597	12,075	12,919	9,427	8,820
Sustainability Recharge	-	-	-	580	921
Mixed Waste Recharge/GL	1	-	-	-	-
National Center for Electron Microscopy	3	-	-	-	-
GSRA - Material Recharge	3,610	3,231	2,917	3,397	3,491
GSRA - Non-Material Recharge	7	19	-	-	-
Low Background Facility	48	-	-	-	-
Total Recharges	37,437	43,538	49,798	49,192	48,161

Note: Minor variances may occur due to rounding.

(a) Includes recharges credited back to direct operating accounts such as ALS, ESnet, JGI, etc.

(b) Does not include Procurement and Travel recharges.

4. FINANCIAL STATEMENT

Table 4.1

Balance Sheet Comparative Statement of Financial Position (\$K)

	FY2017	FY2016
ASSETS:		(Note 3)
Current Assets		
Cash	5,376	4,467
Accounts Receivable	36,249	33,754
Inventories	486	451
Other Current Assets	1,176	670
Total Current Assets	43,287	39,342
Net Plant & Equipment	666,796	630,067
TOTAL ASSETS	710,083	669,409
LIABILITIES AND EQUITY:		
Liabilities:		
Current Liabilities		
Drafts Payable	3,923	2,857
Accounts Payable	12,383	14,646
Inter/Intra DOE Payable	1,115	947
Accrued Expenses	72,126	68,401
Capital Lease Liability - Current	19,257	5,333
Unearned Revenues	64,205	59,835
Other	301	330
Total Current Liabilities	173,310	152,349
Environmental Liabilities	814,678	774,582
Capital Lease Liability - Noncurrent	21,123	12,252
Post-Retirement Benefits (Note 2)	633,061	686,063
Pension Plan Liability (Note 2)	1,110,347	1,404,837
TOTAL LIABILITIES	2,752,519	3,030,083
DOE EQUITY:		
Beginning Equity	(2,360,674)	(2,339,081)
Change in Equity (Note 2)	318,238	(21,593)
Ending Equity	(2,042,436)	(2,360,674)
TOTAL LIABILITIES AND EQUITY	710,083	669,409

Note 1: Summary of Significant Accounting Policies**Basis of Presentation**

This financial statement has been prepared to report the financial position of the Lawrence Berkeley National Laboratory (the Laboratory). It has been prepared from the books and records of the Laboratory in accordance with the Laboratory's accounting policies.

Reporting Entity

The Laboratory is a national research facility operated by UC for DOE under the terms of Contract DE-AC02-05CH11231 (Contract 31). The Laboratory's reporting entity status is that of an integrated contractor, meaning its accounts are integrated with those of DOE through the use of reciprocal accounts.

Basis of Accounting

The financial records of the Laboratory conform to generally accepted accounting principles (GAAP) and cost accounting standards (CAS) when they do not conflict with the provisions of the DOE accounting directives for Management and Operating (M&O) Contractors and are in compliance with Contract 31 between UC and DOE.

Financial Sources

The Laboratory receives funding from DOE in accordance with the provisions of Contract 31. The Laboratory receives authorization to incur costs and conduct operations through modifications to the contract.

In addition to DOE-funded work, reimbursable work is performed for other Federal and non-Federal entities. Costs for reimbursable work are recorded and billed to the requesting entity by the Laboratory. Cash collected from these billings is transmitted to the U.S. Department of the Treasury and deposited in the DOE account. Non-federally funded work performed at the Laboratory must be funded in advance.

Letter of Credit

The Laboratory received authority for expenditures according to a checks-paid letter of credit from the U.S. Department of the Treasury; Letter of Credit Contract Number DE-AC02-05CH11231 with Wells Fargo Bank (WFB). The WFB letter of credit was renewed on November 1, 2012 for a five year term.

Cash

The Laboratory considers all balances in demand deposit accounts to be cash. Demand deposit cash accounts include non-DOE sources of funds including strategic partnership projects, royalty, and gift.

Accounts Receivable

Accounts receivable include reimbursements due from federal sponsors, short term investments held by the University of California Office of the President (UCOP), and other receivables. Other receivables include receivables related to inter-location appointments, intellectual property licensing agreements, and amounts due from non-federal sponsors.

Inventories

The Laboratory identifies three types of inventory: operating materials, precious metals and nuclear materials. For operating materials, only those materials meeting a materiality threshold will be accounted for as an asset on the financial statements. Operating materials that do not meet the materiality threshold are accounted for using the purchase method, which allows items to be expensed when purchased. Precious materials procurement through the inter-DOE procurement process are accounted for as assets. Nuclear materials are accounted for as an asset.

Note 1: Summary of Significant Accounting Policies Continued**Other Current Assets**

Other current assets primarily consist of prepaid expenses. The Laboratory accounts for prepaid expenses as balance sheet assets if the amortization of costs will occur over a period exceeding 12 months and amortization is deemed material.

Net Plant and Equipment

Plant and equipment are purchased, constructed, or fabricated in-house and include major modifications or improvements. The Laboratory's capitalization threshold is \$500K for items with an anticipated service life of two years or more. Plant and equipment items meeting these criteria are capitalized. Costs of construction and fabrication are capitalizable expenses and are recorded initially as construction/fabrication work in process. Upon completion, the value is transferred to the appropriate fixed-assets account. Depreciation is computed using the straight-line method over the estimated useful life of the asset.

Liabilities

Liabilities cannot be incurred by Berkeley Lab without an authorized appropriation, except for approved unfunded liabilities.

Current liabilities include accounts payable, inter/intra DOE payables, accrued liabilities, and accrued payroll and vacation. Current liabilities also include the current portion of our capital lease liability as well as unearned revenue related to advances received for reimbursable work and funds held for others.

Long term liabilities include the long-term portion of capital lease liabilities and environmental liabilities. Environmental liabilities include future clean up, restoration activities, and Environment, Health & Safety (ES&H) liabilities to bring facilities and operations into compliance with existing laws. These liabilities are not funded by current appropriations, but are booked as adjusting entries at the direction of DOE.

Pension Plan and Post Retirement Benefit liabilities are determined through coordination between UC and DOE. Both current employees and retirees at the Laboratory participate in the University of California Retirement Plan (UCRP).

Note 2

Note 2: FY2017 Year-End Adjustments

DOE made adjustments to record FY2017 Post-Retirement Benefit and Pension Plan obligation. These amounts will be reflected in the Laboratory's actuals for October 2017. These adjustments are the result of coordination and approval by both DOE and UC.

The following is the adjusted balance sheet for FY2017:

	Adjusted Balance Sheet (\$K)		
	FY2017	YE Adjustments	Adjusted FY2017
ASSETS:			
Current Assets			
Cash	5,376	-	5,376
Accounts Receivable	36,249	-	36,249
Inventories	486	-	486
Other Current Assets	1,176	-	1,176
Total Current Assets	43,287		43,287
Net Plant & Equipment	666,796	-	666,796
TOTAL ASSETS	710,083		710,083
LIABILITIES AND EQUITY:			
Liabilities:			
Current Liabilities			
Drafts Payable	3,923	-	3,923
Accounts Payable	12,383	-	12,383
Inter/Intra DOE Payable	1,115	-	1,115
Accrued Expenses	72,126	-	72,126
Capital Lease Liability-Current	19,257	-	19,257
Unearned Revenues	64,205	-	64,205
Other	301	-	301
Total Current Liabilities	173,310	-	173,310
Environmental Liabilities	814,678	-	814,678
Capital Lease Liability-Noncurrent	21,123	-	21,123
Post-Retirement Benefits	686,063	(53,002)	633,061
Pension Plan Liability	1,404,838	(294,491)	1,110,347
TOTAL LIABILITIES	3,100,012	(347,493)	2,752,519
DOE EQUITY:			
Beginning Equity	(2,360,674)	-	(2,360,674)
Change in Equity	(29,255)	347,493	318,238
ENDING EQUITY	(2,389,929)	347,493	(2,042,436)
TOTAL LIABILITIES AND EQUITY	710,083	0	710,083

Note 3

Note 3: FY2016 Year-End Adjustments

In FY2017, due to chart of account realignment, certain items have been reclassified from Accounts Payable to Accrued Expenses and Inter/Intra DOE Payable. Additionally, Environmental Safety & Health (ES&H) Liability has been classified as Environmental Liabilities. Such reclassifications have been made to conform to the current period's presentation.

The following is the adjusted balance sheet for FY2016:

	Adjusted Balance Sheet (\$K)		
	FY2016	Chart of Account Realignment Adjustments	Adjusted FY2016
ASSETS:			
Current Assets			
Cash	4,467	-	4,467
Accounts Receivable	33,754	-	33,754
Inventories	451	-	451
Other Current Assets	670	-	670
Total Current Assets	39,342	-	39,342
Net Plant & Equipment	630,067	-	630,067
TOTAL ASSETS	669,409	-	669,409
LIABILITIES AND EQUITY:			
Liabilities:			
Current Liabilities			
Drafts Payable	2,857	-	2,857
Accounts Payable	38,823	(24,177)	14,646
Inter/Intra DOE Payable	-	947	947
Accrued Expenses	45,171	23,230	68,401
Capital Lease Liability-Current	5,333	-	5,333
Unearned Revenues	59,835	-	59,835
Other	330	-	330
Total Current Liabilities	152,349	-	152,349
Environmental Liabilities	413,313	361,269	774,582
ES&H Liability	361,269	(361,269)	-
Capital Lease Liability-Noncurrent	12,252	-	12,252
Post-Retirement Benefits	686,063	-	686,063
Pension Plan Liability	1,404,837	-	1,404,837
TOTAL LIABILITIES	3,030,083	-	3,030,083
DOE EQUITY:			
Beginning Equity	(2,339,081)	-	(2,339,081)
Change in Equity	(21,593)	-	(21,593)
ENDING EQUITY	(2,360,674)	-	(2,360,674)
TOTAL LIABILITIES AND EQUITY	669,409	-	669,409

5. PROCUREMENT & PROPERTY MANAGEMENT

Table 5.1

Purchases Placed Using Purchase Orders/Subcontracts

Total POs	(\$K)	# Actions
\$0 - \$25,000	\$54,051	60,403
\$25,001 - \$150,000	\$75,883	1,288
\$150,001 - \$1,000,000	\$106,803	343
\$1,000,001 +	\$127,712	43
Total	\$364,448	62,077

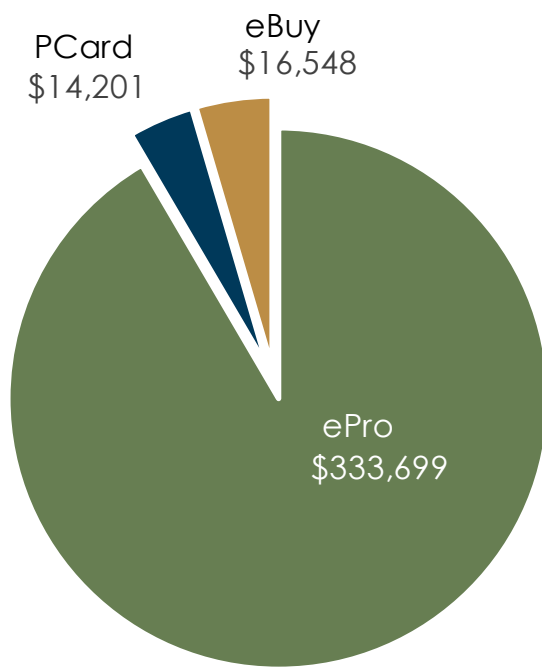
Table 5.2

Procurement Purchase Order Dollar Amount by Area

Area	PO (\$K)
Directorate & Operations	\$103,921
Computing Sciences	\$79,939
Biosciences	\$55,513
Physical Sciences	\$50,318
Energy Technologies	\$36,926
Energy Sciences	\$21,244
Earth & Environmental Sciences	\$16,587
Total	\$364,448

Figure 5.1

Procurement Spend by Channel (\$K)



PCard - Procurement card managed by the Lab
 eBuy - Berkeley Lab online ecommerce marketplace
 ePro - Purchase Orders

Figure 5.2

Laboratory Supplier Socioeconomic Performance

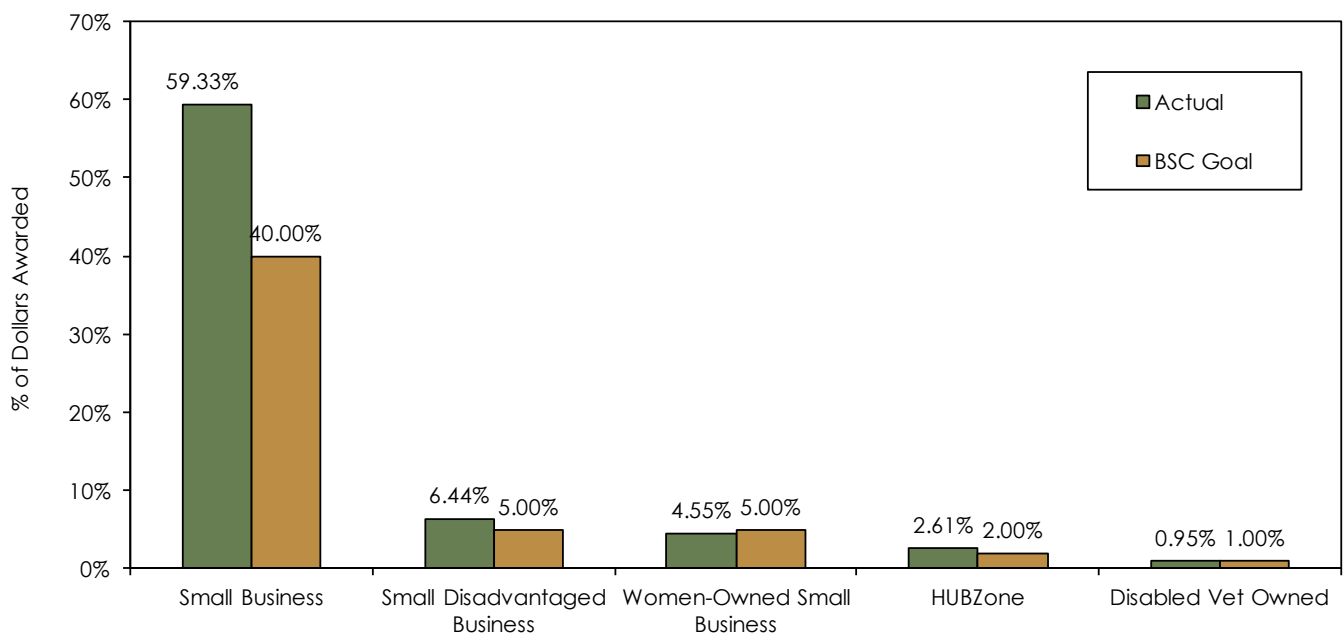


Figure 5.3

Cycle Time for Purchase Orders ≤\$25K – Subcontracting Groups FY2017

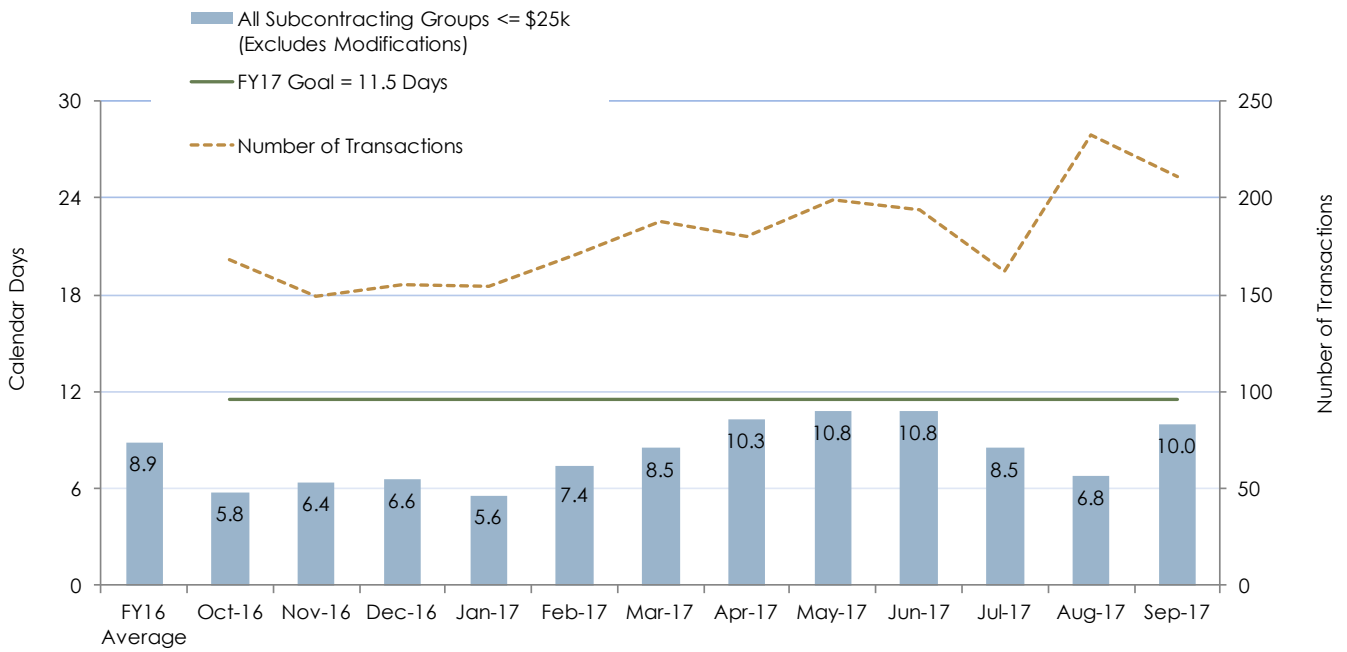


Figure 5.4

Procurement Cost Savings



Table 5.3

Property Management Activity

	# of Assets	Acquisition Value (\$K)	
Equipment (a)	7,273	762,090	
Attractive (b)	18,104	64,329	
High Risk (c)	27	209,408	
TOTAL ASSETS	25,404	1,035,827	
Computers Laptops	6,539	12,189	
Computer Desktops	5,824	11,004	
Tablets	1,272	827	
Total	13,635	24,020	
Inventory campaign	Base	Positive Resolutions	% Positive
Attractive	8,010	7,882	98.40%
Controlled	1,663	1,649	99.16%
High Risk	21	21	100%
Final Results	9,694	9,552	98.54%
Validation Size	288	288	100%
Assets Scanned	8,815	9,552	92.28%
Division	Asset Count	Acquisition Value (\$K)	
BIOSCIENCES			
Biological Systems & Energy	1,327	25,502	
Bioscience Area Office	1,049	28,940	
Environmental Genomics & System Biology	328	4,140	
Joint Genome Institute	960	22,382	
Mol Biophy & Integr Bio	651	16,982	
COMPUTING SCIENCES			
Computational Research	967	2,923	
Computing Sciences ALD	68	105	
National Energy Research Scientific Computing Center	1,288	138,457	
Scientific Networking	696	23,696	
(a) Equipment - Has an acquisition cost > \$10,000; Has an expected useful life of > 2 years.			
(b) Attractive - Attractive regardless of cost (laptops, desktops, workstations, tablets and radios).			
(c) High Risk - property used in the nuclear fuel cycle, firearms, ammunition and explosives, nuclear weapon components or nuclear weapon-like components that do not contain nuclear material as listed in DOE O 474.2.			

continued...

Table 5.3 Continued

Property Management Activity Continued

Division	Asset Count	Acquisition Value (\$K)	
DIRECTORATE & OPERATIONS			
Chief Financial Officer	234	358	
Environment, Health, Safety & Security	331	2,325	
Excess	275	2,143	
Facilities	728	8,601	
Human Resources	136	164	
Information Technology	2,457	24,481	
Laboratory Directorate	115	260	
Operations	28	39	
Protective Services	599	2,346	
Public Affairs	88	159	
EARTH & ENVIRONMENTAL SCIENCES			
Climate & Ecosystems	634	8,773	
Earth & Environ Science ALD	355	1,828	
Energy Geosciences	700	11,039	
Energy Sciences			
Advanced Light Source	1,651	229,650	
Chemical Sciences	1,240	39,107	
Energy Sciences ALD	18	125	
Molecular Foundry	1,171	79,561	
Material Sciences	1,636	57,434	
ENERGY TECHNOLOGIES			
Bldg Tech Urban Systems	524	5,445	
Cyclotron Road	50	361	
Energy Analysis Environmental Impact	573	4,606	
Energy Storage & Distri	769	14,101	
ETA Area Office	151	309	
PHYSICAL SCIENCES			
Accel Tech & App Physics	1,044	93,128	
Engineering	922	13,183	
Nuclear Science	781	69,123	
Physics	860	104,051	
TOTAL	25,404	1,035,827	

6. ACRONYMS & KEY TERMS

Acronyms and Key Terms

ALD	Associate Lab Director
ALS	Advanced Light Source
ANL	Argonne National Laboratory
ARPA-E	Advanced Research Projects Agency-Energy
ARRA	American Recovery and Reinvestment Act of 2009
ASCR	Advanced Scientific Computing Research
A/S	Assistant Secretary (DOE)
B&R	Budget and Reporting
BA	Budget Authority
BES	Basic Energy Sciences
BSC	Balanced Score Card
CAD	Computer Aided Design
CAS	Cost Accounting Standards
CFO	Chief Financial Officer
CR	Computational Research
CRADA	Cooperative Research and Development Agreement
CSR	Contractor-funded Institutionally Supported Research and Development
DARHT	Dual Axis Radiographic Hydrodynamic Test
DNA	Deoxyribonucleic Acid
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of Interior
eBuy	Berkeley Lab's Online Marketplace
EERE	Energy Efficiency and Renewable Energy
ERWM	Environmental Restoration and Waste Management
EHS	Environment/Health/Safety
ePro	Berkeley Lab Purchase Orders
ESnet	Energy Sciences Network
FTE	Full-Time Equivalent
FY	Fiscal Year (Oct. 1 through Sept. 30)
G&A	General and Administrative
GAAP	Generally Accepted Accounting Principles
G/L	General Ledger
GSO	Goods and Services on Order
GSRA	Graduate Student Research Assistant

Acronyms and Key Terms Continued

HR	Human Resources
HWC	Hazardous Waste Charge
HZE	High-Z High-Energy
I-MANAGE	Integrated Management Navigation System
IC	Integrated Contractors
ICO	Integrated Contractor Order
IGPP	Institutional General Plant Projects
IJE	Inter-Jurisdictional Employee Exchange
IPA	Inter-Governmental Personnel Assignment
IT	Information Technology
JCAP	Joint Center for Artificial Photosynthesis
JGI	Joint Genome Institute
LANL	Los Alamos National Laboratory
LBF	Low Background Facilities
LBNL	Lawrence Berkeley National Laboratory
LDRD	Laboratory Directed Research and Development
LLNL	Lawrence Livermore National Laboratory
M&O	Management & Operating
MLA	Multiple Location Appointment
NASA	National Aeronautics and Space Administration
NERSC	National Energy Research Scientific Computing Center
NIH	National Institutes of Health
NNSA	National Nuclear Security Administration
NSF	National Science Foundation
O&M	Operations & Maintenance
OASDI	Old Age, Survivors and Disability Insurance
OCFO	Office of the Chief Financial Officer
OHRCH	Overhead Recharge
ORNL	Oak Ridge National Laboratory
OSPIP	Office of Sponsored Projects and Industry Partnerships
PCard	Procurement Card
PLF	Paid Leave Factor
PNNL	Pacific Northwest National Laboratory
PPPL	Princeton Plasma Physics Laboratory

Acronyms and Key Terms Continued

R&D	Research and Development
S&S	Safeguard & Security
SB	Small Business
SDB	Small Disadvantaged Business
SLAC	Stanford Linear Accelerator Center
SN	Scientific Networking
SNAP	SuperNova Acceleration Project
SNL	Sandia National Laboratories
SPSA	Site Support & Strategic Planning Support Activities
STARS	Standard Accounting and Reporting System
UC	University of California
UCRP	University of California Retirement Plan
WOSB	Women-Owned Small Business

Key Terms

Throughout this document, \$K means dollars in thousands, \$M means dollars in millions, and \$B means dollars in billions.

Disclaimer

This document was prepared as an account of work sponsored by the United States Government. While this document is believed to contain correct information, neither the United States Government nor any agency thereof, nor the Regents of the University of California, nor any of their employees, makes any warranty, express or implied, or assumes any legal responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by its trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof, or the Regents of the University of California. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof or the Regents of the University of California.